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ABSTRACT

Information is presented on a study designed to gather details about the services provided by clinical dental hygienists in traditional and nontraditional settings. The 10 research topics addressed include: services provided by the clinical RDH in the traditional and nontraditional setting; time allocated for such services; how patients are charged in these settings; and income of the clinical RDH in both settings. The study used a sample of 1008 dental hygienists who graduated in 1982 from 48 dental hygiene schools in the United States. Data were collected by mail questionnaires. The 28 findings include the following: about 5% of the respondents chose employment in nontraditional clinical settings; more nontraditional than traditional hygienists attended continuing education programs; on the average, all clinical hygienists spent 78% of the work day providing oral prophylaxis and chairside education; polishing and scaling constituted the bulk of the dental hygiene appointment; pain control procedures were not usually provided by the dental hygienists; and the average payrate for traditional hygienists was 33.2% and for nontraditional hygienists was 36.4%. Two appendices contain detailed frequency tables for adults 1985 and detailed frequency tables for children 1985. Contains 37 references. (SM)

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# THE AMERICAN DENTAL HYGIENISTS' ASSOCIATION

# THE CLINICAL PRACTICE OF TRADITIONAL AND NONTRADITIONAL DENTAL HYGIENISTS

## FINAL REPORT
## JUNE 1987

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# INTRODUCTION

## Statement of the Problem

As an occupational group grows and plans for change it is important to develop an accurate picture of the roles provided by that group. Once an accurate picture is developed, factors which influence roles can be identified and, if needed, strategies for change can be developed.

Although several researchers have examined dental hygienists and their work, there is a paucity of data providing comprehensive documentation. For example, few studies have examined in total the specific services provided, frequency that services are provided, time allocated, fees charged, or the remuneration for providing the services.

Furthermore, previous studies about dental hygienists and their work have not been conducted in a systematic manner and have lacked uniformity in selection and measurement of variables. This variability has made comparison across studies difficult. It is the intent of this research to provide a more comprehensive description of the dental hygienists' work so as to facilitate further comparison.

The 1986-87 House of Delegates of the American Dental Hygienists' Association (ADHA) recognized the need for such data and approved two programs related to dental hygiene practice in both traditional and nontraditional settings. These programs were developed to respond to recommendations resulting from the Dental Health Initiative.

The program entitled Clinical RDH Field Survey was designed to provide detailed documentation about many aspects of traditional dental hygiene practice. It was established to document type of service provided, time scheduled, fees charged to patients, and wages. The program Alternative Practice Setting - Model Sites was developed to collect similar data in various alternative practice settings. Both programs were predicated in the belief that these data would provide documentation of clinical dental hygiene practice in traditional and nontraditional settings alike.

Representing the Division of Professional Development, ADHA staff recognized that the data required to fulfill both program objectives were similar to data being gathered in a national, longitudinal study.

Dr. Boyer, the primary investigator of the longitudinal study, was contacted and a research contract was negotiated. The research contract would accomplish the goals and objectives of both ADHA programs and would allow 1) a broader base of dental hygienists to be included in the information gathering base for the Councils' programs, 2) meaningful regional analysis of the data, 3) identification of potential nonresponse bias, 4) data to be gathered less expensively since the sample was already identified and contacted, and 5) comparisons of clinical dental hygienists employed in dental office work settings and alternative work settings.

A mutually developed research protocol was designed to meet the goals and objectives of the ADHA proposed research programs. The September 1986 mail questionnaire survey was funded by the American Dental Hygienists' Association from money allocated in the 1986-87 budget. The longitudinal study had been funded from July 1983 to June 1986 by the National Institutes of Dental Research.

## Significance to the Profession of Dental Hygiene

Accurate information about dental hygiene practice is important to dental hygiene practitioners, educators, and researchers, as well as the American Dental Hygienists' Association and health care administrators and policy makers. As the norms of dental hygiene practice continue to develop, current information will allow practitioners to assess their work in comparison with their peers. Such information is also important to dental hygiene educators who collectively and individually assess dental hygiene practice and develop and validate curricular content.

As researchers monitor the practice of dental hygiene and identify and document needs, it is important to establish baseline information from which further comparison can be made. Such information is critical to the promulgation of future dental hygiene research and theory. Further, health care administrators and policy makers need accurate data about the nature and scope of the services provided by professional groups so that decisions, recommendations, and policies regarding health care can be developed and implemented. Current information is also needed to support the planning and operational goals of the ADHA. Programs and policies of the ADHA must be predicated upon an ongoing evaluation of dental hygiene practice and must reflect the dental hygiene community as it strives to meet the preventive dental health care needs of the public.

## REVIEW OF LITERATURE

The primary work site of the dental hygienist has changed over time from local and federal government positions to private dental offices. The earliest national study providing statistics on the distribution of dental hygienists by employment area was published in 1948.(1) At that time, it was estimated that there were 5302 dental hygienists in the United States and that 80% of the hygienists were located in the following eight states: New York, Pennsylvania, Massachusetts, Connecticut, Wisconsin, California, Minnesota, and Michigan. The information gathered in that study was limited by a 20% response rate. The primary employment sites were listed as follows: private dental offices (55.7%), school clinics (26.2%), federal civil service (6.2%), armed forces (2.6%), hospitals and institutional clinics (2.0%), dental auxiliary education programs (1.1%), industrial clinics (1.0%), state civil service (0.5%), and part-time practice (4.7%). Studies since 1960 indicate 80% to 98% of dental hygienists are employed by private dental offices.

One of the earliest articles which reported the services provided by dental hygienists stated that a dental hygienist almost always was also an assistant, a bookkeeper, and a stenographer.(2) A survey of ADHA members in 1939 ascertained that less than 10 percent of the respondents only performed prophylaxis. In addition to oral prophylaxis, 90 percent reported doing secretarial work, 70 percent exposed radiographs, 65 percent assisted the dentist chairside and did laboratory work, and 12 percent assisted with administering nitrous oxide.(3) Of the hygienists responding to a nationwide survey of all registered dental hygienists in 1948, 100 percent reported providing oral prophylaxis, 55 percent exposed radiographs, 51 percent assisted the dentist chairside, 46 percent performed secretarial, receptionist and bookkeeping procedures, 33 percent performed laboratory work, and 11 percent participated in administering general anesthetics.(1)

In 1959, a survey of all dental hygienists was attempted by using alumnae lists from dental hygiene schools and lists from state departments of registration. Of the respondents who were employed in dental hygiene, 27.4 percent did chairside assisting, 30.9 percent performed receptionist duties, 22.9 percent did bookkeeping duties, and 15.4 percent performed other dental assisting duties.(4) A 1979 study investigated how the dental hygienists spent their time.(5) The dental hygienists spent an average of 74.9 percent of their time providing services directly to patients; 20.5 percent of their time was spent in patient related services outside the operatory; and 4.6 percent of their time was spent on administrative duties. The percent of the dental hygienists' time spent by type of service was: diagnostic - 11.8%; prevention -76.7%; operative - 5.7%; removable prosthetics - 0.5%; fixed prosthetics - 2.2%; surgery - 0.7%; periodontics - 1.6%; endodontics - 0.5%; and orthodontics - 0.3%.

Most of the nationwide studies of services performed by dental hygienists were conducted before 1960 while most of the studies of specific states or dental hygiene programs (states/schools studies) were done after 1960 and coincided with an interest in expanded functions. The one exception was a 1945 study of dental hygienists practicing in Massachusetts.[6] Like the early nationwide studies, most Massachusetts hygienists performed assisting duties (83%) and about one-third did laboratory work. Seven of the states/schools studies reported the percent of hygienists who performed specific functions,[7-13] three reported the relative frequency with which hygienists performed services;[8,11,14] two reported on how dental hygiene time was spent;[15,16] and one reported the percentage of hygienists who performed specified services during a new patient's first dental hygiene appointment.[17] Due to the variety of methods and variables used to investigate dental hygienists' activities, comparison across studies was not warranted. In general, these studies found that most hygienists most frequently performed traditional dental hygiene services and that 78 percent[16] to 98 percent[15] of the hygienists' time was spent on oral prophylaxis, radiographs, and examinations.

In addition to services provided, the number of patients served, the amount of time allocated for appointments, and the time spent on tasks during an appointment have been examined. From a 1959 nationwide study, it was determined that dental hygienists averaged slightly more than one patient per hour.[4] This corresponds with data collected in 1977 indicating that the hygienists spent an average of 51 minutes per patient. The data further indicated that the average dental hygiene appointment included 29 minutes of prophylaxis, 10 minutes of patient education, six minutes of fluoride application, and six minutes of radiographs.[5] A study conducted by the ADHA in 1982 reported that the majority of hygienists allocated 31 to 45 minutes for an adult patient and 16 to 30 minutes for child patients.[18] Even though different methods were used to measure time, the findings from the three appear to be comparable.

Data from states/schools studies indicated that hygienists spent 43 minutes[8] to 49 minutes [6] per adult patient and 28 minutes[8] to 30 minutes per child patient.[6] The number of patients seen in a day ranged from 1 to 22[8] and 6 to 20[19] with the average number of patients per day reported as 11 patients[8,19] and eight patients.[20]

A paucity of data exists regarding fees charged for services provided by dental hygienists and no reports of this topic could be found in data collected from dental hygienists. In 1977, the Triangle Research Institute analyzed patient visit records completed by receptionists in a sample of dental offices. Part of the data included the average charges per service. The following averages were reported in 1977 dollars: radiographs - $7.03; prophylaxis - $13.62; patient education - $1.02; fluoride treatment - $4.58;

and non-surgery periodontic services (per quadrant) - $8.73.[5] (It should be noted that the charge for patient education is low because only a few practices charged a fee for that service).

Bader reported charges for services provided by dental hygienists at the 13 dental offices participating in the Kentucky demonstration project from 1978 to 1980.[15] The method of reporting charges was mean billings per hour. The mean gross billing per hour for hygienist production was $25.47 with a mean of $21.59 per hour for hygiene procedures, $45.45 for radiographic procedures, and $21.18 for all other procedures performed by dental hygienists.

In 1986 the American Dental Association published fees for an extensive list of services.[24] The mean fee for a dental prophylaxis for an adult was: general practictioner - $25.91; pediatric dentist - $22.31; periodontist - $40.95; and prosthodontist - $34.03. The corresponding fee for a child was general practitioner - $19.03 and pediatric dentist - $17.72.

More data has been reported on how and what hygienists are paid for their work rather than the fees charged for services. National studies showed that 13 percent to 34 percent of hygienists were paid by commission,[4,13,18,22-25] while states/schools studies showed 7% to 52% were paid by commission.[8,26-28] The dental hygienists average hourly pay in 1984 was reported by hygienists as $10.11[25] and was reported by solo dentists as $12.48.[29] There was considerable variation in method and amount of payment from state to state.

A 1983 study of nontraditional dental hygienists ascertained that clinical dental hygiene work consisted primarily of preventive and periodontal patient care procedures and of activities which supported direct patient care.[30] It appeared that nontraditional hygienists were defined as working in settings other than private dental practices, and excluded dental colleges and retail dental practices. The frequency that services were performed was scored on a four point scale: never, rarely, occasionally, and routinely. The services performed "routinely" by 50% or more of these hygienists were: oral health instruction (92%); oral prophylaxis (83.5%); overall health and dental history (68.4%); intraoral examination (63.8%); and topical fluoride application (56.3%). The average hourly salary was $9.50.

While there are several published articles about dental hygienists and their work, the research on dental hygienists has not been done in a systematic and uniform manner and therefore it is very difficult to compare one study to another. Furthermore, rarely has the same employment information been collected in more than one or two studies. The most comprehensive studies were conducted in 1948,[1] 1959,[4] and 1982.[18] In general, studies have shown that most hygienists provide a variety of general types of services in dental offices, with the majority of work time spent providing oral prophylaxes. Prophylaxes are administered to slightly more than one adult per

hour. Fees from prophylaxes account for the greatest percentage of money generated from dental hygiene services. However, a definition of what is included in an oral prophylaxis has not been presented. Furthermore, the distinction between traditional and nontraditional work settings has not been investigated. None of these studies reported a detailed accounting of the hygienists work nor the fees charged for a full range of services provided by dental hygienists. Thus, it was the intent of this research to give a more comprehensive and a current description of the dental hygienists' work and the economic contribution it makes.

## METHODOLOGY

### Purpose of the Study

This study was designed to provide detailed information about the services provided by clinical dental hygienists in traditional and nontraditional settings. Hygienists who were employed in clinical positions in private dental offices were considered to be working in a traditional setting. All other clinically employed hygienists were classified as working in nontraditional settings. Information related to the frequency of and time allocated to services, fees charged, and remuneration for services was collected. The following research questions were addressed:

1. What services are provided by the clinical RDH in the traditional setting?
2. What is the frequency each service is provided by the clinical RDH in the traditional setting?
3. How much time is allocated for services provided by the clinical RDH in the traditional setting?
4. How much are patients charged for services provided by the clinical RDH in the traditional setting?
5. What is the income of a clinical RDH in the traditional setting?
6. What services are provided by the clinical RDH in the alternative practice setting?
7. What is the frequency each service is provided by the clinical RDH in the alternative practice setting?
8. How much time is allocated for services provided by the clinical RDH in the alternative practice setting?
9. How much are patients charged for services provided by the clinical RDH in the alternative practice setting?
10. What is the income of a clinical RDH in an alternative practice setting?

### Sample

The sample of this study was comprised of 1008 dental hygienists who graduated in 1982 from 48 dental hygiene schools located in the United States. The cohort of dental hygienists was selected in their senior year of dental hygiene education. The 48 dental hygiene programs constituted a judgment sample which was selected to ensure variation on frequency of student clinical experiences, to have an approximately equal number of programs in four geographical regions in the United States, to include a mix of baccalaureate and associate degree granting programs, and to represent nondental and dental school settings. Chi-square analysis of goodness-of-fit indicated that statistically significant differences did not exist between the proportion of dental hygiene programs in the United States and the proportion in the sample by region, academic degree, and dental school and nondental school setting.[31]

## Interrelationship with Longitudinal Study

Subjects described above were currently participating in an ongoing study conducted by Dr. Boyer. Although the Subjects were recent graduates, it was concluded that the cost-savings of utilizing the existing broad based sample outweighed the possible bias that recent graduates may be more likely to utilize new practice techniques and preventive procedures than less recent graduates. Furthermore, the cohort was selected to be the subjects for this study so that data obtained for theses purposes could be examined in relationship to previously gathered data about the cohort. From previous surveys of the cohort, it was ascertained that approximately 90% were employed in private dental offices and 5% in other clinical positions.

## Variables

Information previously collected by the longitudinal study included items on percent of day spent on seven general work areas; amount of time scheduled for adult and child recall patients; amount of time scheduled for three work aspects of the adult appointment and four work aspects of child appointment; the frequency with which 13 services were performed for adults and nine services for children; and the amount and method of pay. The questionnaire collecting these data was administered in September, 1985.

In contrast, the jointly developed questionnaire contained a detailed list of 141 dental related services. Hygienists were asked to indicate the frequency with which they performed the services for adult and child patients and the fee charged for the services. Additionally, information about supervision, assistance in providing care, total fees charged, pay, hours worked, and number of patients seen on the work day before completing the September 1986 questionnaire was requested. This questionnaire was administered in September, 1986.

Frequency of providing services was measured on a five-point Likert-type scale: 1 - Almost All the Time; 2 - Most of the Time; 3 - Sometimes; 4 - Seldom; and 5 - Never. The hygienists were asked to report only the frequency with which they performed the service and thus "never" does not mean that patients did not receive the service but that the hygienists did not personally perform the service. Fees were requested only for services performed by the hygienists. Hygienists were instructed as follows:

> For all services that are not charged separately, assign a letter code for the cluster of services which are included in one fee, such as P for prophylaxis. Put the letter on the line and an explanation in the space below the group of services. For example P=part of prophy A=$28.

For services which are charged separately, put the fee for child in the child column and the fee for adult in the adult column.

For services which you do but there is no charge, put "NC".

For services which you do not do, leave the columns blank.

## Instrument Development

The questionnaire used previously in the longitudinal study and administered in September, 1985 had been used with the cohort in February, 1983 and September, 1983. The questionnaire had been pretested, revised and again tested with approximately 30 dental hygienists who included employed and unemployed dental hygienists and hygienists who worked at a variety of work settings. Discussions with these hygienists indicated that the final items were clear and asked what they intended to ask. The consistency in findings at the three time periods indicated that the questionnaire was reliable.

The questionnaire developed jointly was pretested by five dental hygienists employed in dental offices and other practice settings. Comments made by the hygienists who pretested the questionnaire led to changes in the instructions which accompanied the questionnaire.

## Data Collection

Data were collected by mail questionnaires. Each questionnaire was accompanied by a letter bearing the person's name and the researcher's personalized signature. Approximately four weeks after the questionnaire was mailed, a follow-up letter was sent to stimulate the nonrespondents to reply. A third follow-up letter was sent eight weeks after the regional questionnaire and a second questionnaire was included. Approximately eleven weeks after the original mailing, a third questionnaire was sent with a hand written message on a post-a-note. (See Appendix C.)

All responses were checked for accuracy and completeness. If a portion of the questionnaire was not completed, the respondent was contacted again and requested to supply the missing information. For the September 1986 questionnaire, if a fee was given for a service but the frequency was marked "never," then the fee was not coded. If the hygienist indicated she did the service and the fee was not answered as requested, a copy of the missing information was returned for clarification and completion. After the questionnaires were reviewed and were as complete as possible, they were key punched.

## Statistical Analysis

The Statistical Package for Social Scientists was used to facilitate data analysis. Data are reported for clinical dental hygienists in private dental practice (traditional) and clinical dental hygienists in positions other than

private dental practice (nontraditional). Frequency distributions, cross tabulations, chi-square analysis, and t-tests were utilized to analyze the data.

## RESULTS

### Respondents

The September 1985 survey was returned by 850 dental hygienists (83%) and the September 1986 survey was completed by 766 respondents (77%). In September, 1985, 81.5% of the respondents were working in dental hygiene positions, 3.8% in dental hygiene and nondental hygiene positions, 5.6% in nondental hygiene positions, and 9.1% were not working. By September 1986, when 766 hygienists responded, 75.7% were working in dental hygiene positions, 6.4% in dental hygiene and nondental hygiene positions, 6.4% in nondental hygiene positions, and 11.5% were unemployed.

Of the 850 respondents to the September 1985 survey, 703 (83%) were providing clinical dental hygiene services. Of those in clinical positions, 670 (95%) respondents were in traditional settings and 33 (5%) were in nontraditional settings. In 1986, 615 (80%) respondents were providing clinical dental hygiene services. Of these respondents, 588 (96%) hygienists were in traditional settings and 27 (4%) were in nontraditional settings. Overall, approximately 4% of all respondents and 5% of hygienists employed in clinical positions were in nontraditional settings.

The number of responses in 1985 varied slightly for each question based on no answers (0.1% to 1.5%) and hygienists who did not see adult patients (N=9, 1.1%) or did not see child patients (N=62, 7.3%). The response for the September 1986 data was influenced by the high "no answer" rate to portions of the questionnaire. Items about services for adult patients were not answered by 130 traditional hygienists and items for child patients by 152 traditional hygienists. The corresponding numbers for nontraditional hygienists were 1 and 3, respectively. In addition to these no answers, each child service item was not answered by a mean of 4 traditional hygienists and a mean of 0.2 nontraditional hygienists and each adult service item by a mean of 3 traditional and 0.2 nontraditional hygienists.

### Characteristics of the Sample - 1985 and 1986

In 1985, 60.4% were married and 34.6% had never married and in 1986 the percent never married decreased to 27.2%. At both times the percent of the respondents who were female was 99.5%. The percent of hygienists who did not have children decreased from 75.1% in 1985 to 67.4% in 1986. In 1985, 30% of the hygienists were 22 to 24 and 55% were 25 to 29 years of age; while in 1986, 14% were 22 to 24 and 66% were 25 to 29 years of age.

Thirty-three percent of the respondents in September 1985 were employed by more than one site and in September 1986, 35% were. At both time periods, respondents who worked at more than one site usually worked at two sites (80%).

The findings presented in the rest of the paper are based on the one site where the respondent worked the most time. Furthermore, the results are limited to respondents who provided clinical dental hygiene services, and are tabulated for hygienists whose primary site was a private dental office (traditional) and a site other than a private dental office (nontraditonal).

In September, 1986, four years after graduating, the traditional hygienists were distributed similarly to all respondents for most of the characteristics in Table 1. Slight differences were noted for the percent enrolled in formal education programs and the percent attending continuing education programs. Traditional hygienists were less likely to be enrolled in formal education programs than were all respondents, 8.8% and 12.3% respectively; however, traditional hygienists were more likely to have participated in a continuing education program than were all respondents.

Several differences were noted between traditional and nontraditional hygienists. All the hygienists employed in nontraditional positions were female. More nontraditional hygienists were never married (42.4%) than were traditional hygienists (26.0%) and, correspondingly, were less likely to have children (24.2% vs 30.1%, respectively). Nontraditional hygienists were more likely to be 22 to 24 and 35 to 39 years of age than were traditional hygienists. Nontraditional hygienists were not only more likely to attend continuing education courses but also to attend a greater number of courses than were traditional hygienists. They were also more likely to be employed in dental hygiene and nondental hygiene positions than were traditional dental hygienists. Hygienists who were employed in nontraditional positions were more likely to have been graduated from baccalaureate programs and programs which awarded both degrees and to work in the eastern region of the United States than were hygienists employed in traditional settings. Subjects in the western region were least likely to be employed in nontraditional settings.

## Discussion/Summary

In summary, the characteristics of the sample reflected the fact that the cohort was comprised of recent graduates. The employment rate was higher than other national samples and reflects the recency of graduation and the more recent trends of women in the labor market. (The employment rate of the cohort is discussed in more detail in a paper submitted for publication in Dental Hygiene.) Respondents who were employed in dental hygiene were more likely to attend continuing education programs than were all respondents and those employed in nontraditional settings were most likely to attend continuing education programs. Those in nontraditional settings may be encouraged to attend programs through time off with pay and reimbursement for expenses. The fact that hygienists employed in nontraditional settings were more likely to have additional jobs, which were nonhygiene positions, may have been related to the larger percentage of "never married" hygienists in

nontraditional jobs and thus have the flexibility and desire to work extra hours.

A higher percentage of these dental hygienists were enrolled in formal education programs than was reported by Wyshak in 1976.[24] However, the subjects in Wyshak's study were a cross-section of all ages of dental hygienists and therefore is not directly comparable to this sample.

This study of recent graduates found that approximately 5% of clinically employed hygienists were working in nontraditional settings. This figure is about 3% less than that estimated for hygienists in the study reported in 1984 by the University of Maryland.[30] The Maryland study did not compare nontraditional and traditional hygienists and did not ask about marital status; thus many of the differences between the two groups of hygienists found in this study can not be compared. Two characteristics asked in both studies were college degree and region. This study found a greater percentage with baccalaureate degrees than did the Maryland study. Perhaps these recent graduates of baccalaureate programs felt better prepared for nontraditional employment, than did recent graduates of associate or certificate programs. The distribution of nontraditional settings by region was similar for both studies: greatest in the east and least in the west.

## Work Environment - September 1986

### Setting

By definition in this study, traditional hygienists provided clinical dental hygiene services in solo or group dental offices and nontraditional dental hygienists provided clinical dental hygiene services in settings other than solo or group dental practices. Of the traditional dental hygienists, 73.0% were employed in solo dental practices and 27.0% in group practices. The dentists with whom the traditional hygienists worked were categorized as general practitioners (86.2%), periodontists (8.3%), pediatric dentists (1.9%), orthodontists (1.5%), prosthodontists (0.3%), and other (1.9%). Seventy-one percent of the traditional dental hygienists described their work as 100% clinical dental hygiene; 15.7% as clinical dental hygiene plus dental assisting duties; 10.6% as clinical dental hygiene plus oral hygiene instruction; 1.5% as primarily dental assisting and receptionist functions; and 1% as clinical dental hygiene plus expanded functions.

The nontraditional hygienists were employed in public health clinics (26.1%), hospitals (21.7%), dental colleges (21.7%), health maintenance organizations and capitation clinics (17.4%), and other settings (13.0%). Approximately 34.8% described their work as 100% clinical dental hygiene; 34.8% as clinical dental hygiene plus dental assisting duties; 13.0% as primarily research functions; 8.7% as primarily public health services; and 4.3% as clinical dental hygiene plus oral health instructions.

## Personnel

Traditional dental hygienists worked at settings where 1 to 6 dentists worked and only one dentist worked at 77% of these settings (Table 2). The mean number of dentists per setting was 1.4 and the median was 1.0. Greater numbers of dentists worked at nontraditional settings: 1 to 80 dentists with a mean of 7.6 and a median of 2.0. The number of dental hygienists varied from 1 to 8 at traditional settings and 1 to 4 at nontraditional settings. The median was one hygienist at both types of settings and the mean was 1.5 at traditional settings and 1.8 at nontraditional settings.

Roughly 51% of the traditional settings employed dental assistants who provide direct patient care and 60% employed dental assistants who assist others with providing care; while, at nontraditional settings, the percents were 40% and 77%, respectively. At all the traditional settings, the number of dental assistants who provide care ranged from 0 to 12 with a mean of 0.9 and a median of 1.0. However, at traditional sites which employed these dental assistants the mean was 1.7 and the median was 1.0. Correspondingly, at nontraditional settings, the number of dental assistants who provide care ranged from 0-10 with a mean of 1.4 and a median of 0.0. At nontraditional settings which employed these personnel, the mean was 3.6 and the median was 2.0. Thus, although the nontraditional settings were slightly less likely to employ dental assistants to provide direct patient care, they were employed at greater numbers than traditional settings.

From 0 to 15 dental assistants who assist in the provision of care were employed at traditional settings with a mean of 1.8 and a median of 1.0. For all traditional settings, the mean was 1.1 and the median was 1.0. Nontraditional settings employed 1 to 80 of these dental assistants with a mean of 9.3 and a median of 2.0. At all traditional settings, the mean was 6.2 and the median was 1.0. Thus, nontraditional settings were more likely to employ dental assistants who assist with care and to employ them in greater numbers than were traditional settings.

Receptionists were employed at almost 95% of the traditional settings and 70% of the nontraditional settings. The number of receptionists employed at traditional settings ranged from 1 to 61 with a mean of 1.6 and a median of 1.0. For all traditional settings, the mean was 1.5 and the median was 1.0. At nontraditional settings, from 1 to 20 receptionists were employed with a mean of 3.0 and a median of 1.0. At all nontraditional settings the mean was 2.1 and the median was 1.0.

Hygienists could indicate two additional types of personnel and 28% of traditional hygienists listed one additional worker and 9% listed two additional workers. At nontraditional settings, these figures were 33% and 17%, respectively. Of the respondents who indicated other personnel, 127 respondents listed 169 personnel. The other personnel listed and the number of respondents listing them were: office manager (38), insurance personnel

(35), business/financial personnel (26), laboratory technician (19), front office helpers (10), file clerk (8), computer personnel (6), public relations personnel (6), student observers/workers (6), x-ray technicians (3), sterilization personnel (3), hygiene assistant (2), nurse (1), speech therapist (1), recall person (1), and handyman (1).

The total number of personnel showed considerable variation-each group had one extreme score. The means for the two groups were quite different, 6.6 for traditional hygienists and 18.4 for nontraditional hygienists. However, the medians were similar, 5.0 for traditional and 6.0 for nontraditional hygienists.

## Assistance with Care

For both groups of hygienists, assistance was most likely to be provided in scheduling and billing patients; however, the percentages were different for the two groups: traditional - 83.2% and 89.5%, respectively and nontraditional - 66.7% and 59.3%, respectively. (See Table 3). The third highest for traditional hygienists was assistance with greeting the patient (52.6%); whereas, the third highest for nontraditional hygienists was assistance with x-rays (44.4%). Nontraditional hygienists were more likely to have help with bringing the patient to the operatory, seating the patient, dismissing the patient, assisting in providing services, and to list "other" types of assistance than were traditional hygienists. In general, traditional hygienists had a higher level of receptionist assistance while the nontraditional hygienists had a broader scope of assistance. Additionally, for five of the eight areas of assistance, 20% or fewer hygienists received help. The types of information written in the other category were process x-rays (8), clean operatory (5), clean instruments (3), help with recall (7), polish teeth (4), apply fluoride (2), assist with sealants and periodontal charting (4), and provide oral hygiene instruction (3).

The dentist's involvement in hygiene care varied considerably for traditional and nontraditional hygienists. (Table 4). Approximately 42% of the nontraditional hygienists stated the dentist examined every patient and 31% stated the dentist did not examine any patients. Contrastingly, 60% of the traditional hygienists said the dentist examined every patient and only 4% stated the dentist did not examine any patients. Approximately 2% of the traditional and 8% of the nontraditional hygienists reported that the dentist was not at the work site that day.

Fewer hygienists in both groups stated the dentist evaluated their work versus examined the patient. Fifty-two percent of the nontraditional and 20% of the traditional hygienists said the dentist did not evaluate their work; while 26% and 49%, respectively, said the dentist evaluated every patient.

## Work Hours

Traditional dental hygienists worked a mean of 49.3 weeks per year (median = 50 weeks) and nontraditional hygienists worked a mean of 48.3 weeks (median = 50 weeks). (See Table 5). Nontraditional hygienists worked more days per week than traditional hygienists: mean = 4.2 days and median = 4.8 days for nontraditional and mean = 3.5 days and median = 4.0 days for traditional. The mean and median number of hours worked per day were both 8.0 hours for traditional hygienists. The median was also 8.0 hours for nontraditional hygienists but the mean was slightly more, 8.1 hours. The average figures for the number of hours worked on the "last day," i.e., the day detailed information was reported about their work, were very similar to the number of hours worked per day.

## Number of Patients

The mean number of patients seen on the day of reporting (last day) was 8.7 for traditional hygienists and 7.3 for nontraditional hygienists. The median number of patients was 8 for both groups of hygienists (Table 6). Thus traditional dental hygienists saw slightly more than one patient per hour while nontraditional hygienists saw slightly fewer than one patient per hour.

## Discussion/Summary

For the most part, the variables included in the work environment section have not been reported in the literature. Thus, only a very few comparisons can be included in the summary.

Dental hygienists who worked in traditional settings were more likely to describe their work as "100% clinical dental hygiene." Contrastingly, nontraditional hygienists were equally likely to state "100% clinical dental hygiene" and "clinical dental hygiene plus dental assisting."

A considerable range of numbers of personnel by type was found at both settings. The widest range for dentists and dental assistants who assist only was found in nontraditional settings, while the widest range for dental hygienists, dental assistants who provide direct patient care, receptionists, and other personnel was found in traditional settings. Even though the range varied by setting, the mean number of personnel for each type was greatest at nontraditional settings.

The type of personnel which was most likely to aid the hygienist was the receptionist or equivalent front office personnel who scheduled and billed the patient. Overall, fewer nontraditional hygienists indicated they received assistance; but they received a wider variety of assistance than traditional hygienists.

Hygienists indicated that dentists were more likely to examine patients rather than evaluate the hygienists' work. In fact, a few hygienists commented that the dentist did not need to evaluate the work. Nontraditional

hygienists were least likely to have their work evaluated and their patients were least likely to be examined by the dentist during the hygiene appointment. This lower dentist involvement in dental hygiene care in nontraditional settings appeared to be a result of the dentist electing not to do these procedures as the dentist was usually at the setting. About 8% of the nontraditional hygienists said the dentist was not at the work setting on the day of reporting. Although not exactly the same measure, the Maryland study found that about 5% of the nontraditional hygienists stated they worked at a setting where dentists were "not available."[30] Furthermore, in the Maryland study, general supervision, which means the dentist need not be present at the work site, was indicated as the type of supervision for 31% to 63% of the hygienists, depending on the service being provided. It would appear that at both types of settings, most dentists examined the patient prior to dismissal of the patient.

Both groups of hygienists worked at the primary work site an average of 8 hours per day. Nontraditional hygienists worked almost one more day per week at the primary work site than did traditional hygienists. The nontraditional hygienists in this study worked more hours per week at the primary work site than those in the Maryland study.[30] Since the Maryland study was much larger, it is surprising to find a wider range of hours worked in this study. Numerous other studies have reported measures of amount of time worked, but have rarely distinguished by primary work site. In general, the hours, days, and weeks reported by these recent graduates are high and this finding is probably attributable to recency of graduation.

During the work day, traditional hygienists saw slightly more than one patient per hour and nontraditional hygienists saw slightly fewer than one patient per hour. In 1959, Hollinshead reported that hygienists performed slightly more than one prophylaxis per hour.[4] The range of patients seen in one day was wider than reported in other studies.[8,19] The mean was the same as that reported by Quam in 1978[20] but was less than that reported by Johnson in 1977[8] and Holcomb in 1986.[19]

## Dental Hygiene Work

### Percent of Day - September 1985

The general work area which consumed the greatest percentage of the dental hygienists' work day was "oral proplylaxis and chairside education" (Table 7). It was the only work area in which all dental hygienists participated and 10% to 99% of the hygienists' day was spent providing prophylaxis and chairside education. From 0% to 70% of the day was spent taking and processing radiographs and from 0% to 60% of the day was spent on office management procedures. Dental assisting consumed from 0% to 70% of the day, formal plaque control from 0% to 50%, restorative procedures from 0% to 30%, and laboratory work from 0% to 50% of the day.

Overall, the frequency distributions for each of the seven general work areas were similar for traditional and nontraditional dental hygienists (Table 7). Differences were noted in percent who spent zero percent of the day in three areas: taking and processing radiographs, dental assisting, and conducting formal plaque control. A greater percentage of nontraditional dental hygienists reported spending zero percent of the day taking and processing radiographs; whereas, a greater percentage of traditional dental hygienists reported spending zero percent of the day assisting and conducting formal plaque control programs.

For ease in comparing the two groups, averages were calculated. On the average, the dental hygienists spent 77.8 percent of a day providing oral prophylaxis and chairside education services (Table 8). The mean percent of the day taking and processing radiographs was 11.2% and the mean percent performing office management tasks was 6.1%. The remaining five percent of the day was spent on dental assisting (1.8%), formal plaque control (1.6%), restorative procedures (0.7%), and laboratory work (0.7%). The average percents were similar for traditional and nontraditional dental hygienists. The greatest difference was in dental assisting: nontraditional hygienists spent twice as much of their day assisting than did traditional dental hygienists.

Work areas which were not performed by some of the dental hygienists were: taking and processing radiographs (6.6%); office management (27.9%); dental assisting (74.7%); laboratory work (85.3%); formal plaque control (85.9%); and restorative procedures (87.1%) (Table 7). Since the large percentages not performing a general work area would influence the measures of central tendency, the measures of average percent of day were recalculated excluding zero (Table 9). As would be expected the mean for each work area increased as did the mode for five areas and the median for four areas. The mean for dental assisting increased four-fold, laboratory work six-fold, formal plaque control seven-fold, and restorative procedures eight-fold. Areas for which the direction and magnitude of difference remained similar for traditional and nontraditional hygienists were exposing and processing radiographs, assisting, and office management. One area which reversed was formal plaque control. Although overall, nontraditional hygienists spent more of their day providing formal plaque control, when percent of day was controlled for hygienists who do the service, traditional hygienists spent more of their day on plaque control than nontraditional hygienists did. Without controlling for doing the procedure, percents of day spent on laboratory and restorative procedures were similar for the two groups. After controlling, traditional hygienists spent slightly more time in these two areas than nontraditional hygienists spent. However, even with these large increases in average percentages, very little of the day was spent in these work areas.

## Frequency Perform Services - September 1985

The frequency with which dental hygiene work was done was measured on a five-point Likert-type scale. Thirteen services were measured for adult patients and nine for child patients.

Of the 13 services listed for adult patients, taking radiographs, root planing, and applying topical fluorides were performed at much higher frequencies than were the other services. (See Tables 10 and 11 for summary distributions and Appendex A for detailed table.) Traditional hygienists were more likely to perform all the services more frequently than were nontraditional dental hygienists. Services which were never performed by 50 percent or more of all the clinical dental hygienists were: administer nitrous oxide, place sealants, administer local anesthesia, place restorations, provide chemical curettage, and perform gingivectomies.

Greater variation was found between traditional and nontraditional dental hygienists for frequency of services provided to child patients. (See Tables 12 and 13 for summary distributions and Appendix B for detailed table.) Traditional dental hygienists were more likely to provide radiographic services more frequently and to never provide topical fluoride services than were nontraditional hygienists. Additionally, traditional hygienists were more likely to provide sealants "almost all the time" than were nontraditional hygienists. Nontraditional hygienists were more likely to provide nutritional counseling "almost all the time" than were traditional hygienists. Seventy-five to ninety percent of all clinical dental hygienists indicated they never placed restorations, administered nitrous oxide, and administered local anesthesia.

Comparisons of the eight services for which relative frequency was asked for child and adult patients indicated that radiographic services were provided at similar frequencies for adult and child patients by traditional and by nontraditional hygienists. While traditional and nontraditional hygienists did not frequently provide local anesthesia, nitrous oxide, placement of restorations, and polishing of restorations, both groups were more likely to provide these services to adult patients than to child patients. Topical fluorides and sealants were more likely to be provided to child patients than adult patients.

## Time Allocated for Tasks - September 1985

Most hygienists reported scheduling adult recall patients for a 45 minute dental hygiene appointment (Table 14) and child recall patients for 30 minutes (Table 15). These were the modal times for both traditional and nontraditional dental hygienists.

During the adult recall appointment, most hygienists, both traditional and nontraditional, spent one to five minutes on health history and examination, 21 to 45 minutes on scaling, root planing, and polishing, and zero to ten

minutes on patient education (Tables 16, 17, 18). Traditional hygienists were slightly more likely to spend more than 10 minutes on health history and examination, to spend 20 minutes or less on scaling, root planing, and polishing, and to spend 10 minutes or more on patient education for adult recall patients than were nontraditional hygienists.

For child recall appointments most traditional and nontraditional hygienists spent one to five minutes on health history and examination, 15 to 20 minutes scaling and polishing, one to five minutes taking radiographs, and one to five minutes on topical fluoride applications (Tables 19, 20, 21, 22). Nontraditional dental hygienists were more likely to spend six to 15 minutes on health history and examination, 21 to 45 minutes on scaling and polishing, six to 10 minutes on fluoride application, and to never take radiographs for child recall patients than were traditional hygienists.

## Frequency of Services - September 1986

The 141 services included in the questionnaire were categorized into the following groups for presenting the findings: examination services - 27 items; chart services - 15 items; radiographic and diagnostic services - 13 items; consultations and referrals - 9 items; treatment planning - 7 items; preventive and periodontal procedures - 14 items; patient education - 14 items; group programs - 5 items; miscellaneous services - 14 items; pain control and prescription procedures - 10 items; and management activities - 13 items. Hygienists were asked to report the frequency that each service was performed on a five-point Likert-type scale for child and adult patients. Examination, charting, and treatment planning services were reported for new patients (initial patient visit) and recall patients (recall patient visit).

All services were analyzed for frequency that they were preformed by hygienists in traditional settings and hygienists in nontraditional settings. Because of the small number of hygienists employed in nontraditional settings and so that chi-square analysis could be used to ascertain statistically significant differences between the two settings, the five frequency categories were combined into three groups: 1) almost all the time and most of the time; 2) sometimes; and 3) seldom and never. Statistically significant differences for the two groups of hygienists are summarized in Table 44.

### Examination Services

The most frequently provided examination services for initial and recall child patients were visual gingival examination, visual soft tissue examination, caries examination, and medical history (Table 23). About 65% to 80% of the traditional hygienists provided these services almost all the time and 48% to 61% of the nontraditional did these services at that high frequency. Approximately half of the hygienists provided emergency

examinations for child patients. Dental hygienists were most likely to "seldom" or "never" take a pulse or blood pressure for child patients. Periodontal probing also was infrequently done for children. Statistically significant differences were noted between traditional and nontraditional dental hygienists for head and neck palpitation at a recall patient visit and for probing preselected teeth at an initial patient visit (Table 44). Both services were more likely to be done by hygienists employed in nontraditional settings than those in traditional settings.

More examination services were done and were done more frequently for adult patients than for child patients. The four services which were done most frequently for children - visual gingival examination, visual soft tissue examination, caris examination, and medical history - also were performed most frequently for adults (Table 24). Sixty-five percent to 80% of the traditional hygienist did these services almost all the time and 42% of 73% of the nontraditional hygienists did them at that frequency. About half of the hygienists provided emergency examinations for adult patients. Hygienists were more likely to take pulse and blood pressure readings on adults than on children. In general, examination services were provided at a higher frequency for recall patients than initial patients. There were no statistically significant differences between the two groups of hygienists on the frequency that each examination service was performed for adult patients.

Chart Services

Treatment provided by dental hygienists was recorded in the patients' chart almost all the time by 88% to 95% of the hygienists (Table 25 and 26). Slightly more hygienists reported providing examination services than reported charting the corresponding examination findings. Nontraditional dental hygienists were statistically significantly more likely to chart probe depths for recall child patients than were traditional hygienists (Table 44). Whereas, traditional hygienists were more likely to chart probe depths and occlusal findings for recall adult patients than were nontraditional hygienists.

Radiographic and Diagnostic Services

Almost 95% of the hygienists provided radiograpic services (Table 27 and 28). Adult patients were slightly more likely to have radiographs taken than were child patients. Traditional hygienists were statistically significantly more likely to expose bitewing x-rays for child and adult patients and to process film for child patients than were nontraditional hygienists (Table 44).

Other diagnostic tests and services were infrequently performed by dental hygienists. Although infrequently done, nontraditional hygienists provided

tooth vitality tests and bacterial evaluations statistically significantly more frequently for adult patients than did traditional hygienists (Table 44).

Consultation and Referral

Most hygienists reported that they consulted the dentist or physician as needed and the dentist was consulted more frequently than the physician (Tables 29 and 30). Only 5% reported that they never consulted a dentist.

Although there were no statistically significant differences among the two groups of hygienists, the most frequently stated reason that traditional hygienists consulted the dentist was to discuss treatment needs. To discuss medications was the most frequently stated reason that nontraditional hygienists consulted the dentist.

Referrals were most frequently made to the dentist for treatment needs. The most infrequent referral was to a speech pathologist. Similar distributions were found for child and adult patients and by traditional and nontraditional dental hygienists.

Treatment Planning

About 80% to 90% of the hygienists used the information they obtained about the patient to develop a dental hygiene treatment plan and approximately 50% to 60% did it "almost all the time" (Tables 31 and 32). If the hygienists developed a treatment plan, it was usually recorded in writing. About 50% of the hygienists reported they developed total dental treatment plans and about 15% did it "almost all the time" for recall and initial patients. There were no statistically significant differences between the two hygiene groups for treatment planning.

Preventive Services

Prophylaxis services were provided most frequently by all dental hygienists (Tables 33 and 34). Over 90% of traditional hygienists reported that they polished teeth almost all the time for adult and child patients, while over 90% of the nontraditional hygienists polished teeth almost all the time for adults and about 75% polished children's teeth that frequently. The difference between the frequency that the two groups polished children's teeth was statistically significant (Table 44). Polishing was almost always done with a rubber cup rather than a prophy jet. Although prophy jets were used infrequently, they were more likely to be used on adults than children.

Approximately 98% of the traditional dental hygienists reported that they hand scaled supragingivally and 95% subgingivally almost all the time for adult patients. Eighty-eight percent of the nontraditional hygienists reported hand scaling supragingivally and subgingivally almost all the time for adult patients. The differences between the two groups of hygienists were

not statistically significantly different. Only one or two hygienists reported that they never hand scaled teeth of adult patients.

Child patients did not require as high a frequency of scaling as adult patients. Seventy-seven percent of traditional hygienists hand scaled supragingivally for child patients almost all the time and 1.4% never did; while, 70% of the nontraditional hygienists hand scaled children's teeth supragingivally almost all the time and 9% never did. This difference between traditional and nontraditional hygienists was statistically significant (Table 44). Slightly more than half of the hygienists reported they had scaled children's teeth subgingivally almost all the time. Eight percent of the traditional hygienists and 13% of the nontraditional hygienists never hand scaled subgingivally for children.

Ultrasonic scaling was done less frequently than hand scaling. Approximately 30% of the traditional hygienists and 40% of the nontraditional hygienists used ultrasonic scaling almost all the time for adult patients and 7% and 20%, respectively, never did. Fewer hygienists used ultrasonic scaling for children than for adults. Almost 11% of the traditional hygienists and 18% of the nontraditional hygienists used ultrasonic scaling almost all the time for children while approximately 60% of both groups never did.

Root planing was done much less frequently than scaling. About 50% of all hygienists root planed adult patients almost all the time and less than 4% never provided root planing for adult patients. For child patients, about 10% root planed almost all the time and 60% never did.

Curettage was performed almost all the time by about 20% of all hygienists and slightly less than 1% did gingivectomies almost all the time for adult patients. Approximately 25% never performed curettage and 90% never did gingivectomies for adult patients. For children, about 96% never did gingivectomies. Eighty percent of the traditional hygienists never did curettage while 70% of the nontraditional hygienists never did curettage. The differences for advanced periodontal procedures was not statistically significantly different for the two groups.

Topical fluorides were applied almost all the time for child patients by 70% of all hygienists and were never provided by 6% of the traditional hygienists and 9% of the nontraditional hygienists. Adult patients received topical fluorides much less frequently than child patients. Twenty-seven percent of the traditional hygienists applied topical fluoride almost all the time and 18% never applied topical fluorides to adult patients. Similarly, 38% of the nontraditional hygienists applied topical fluoride almost all the time to adult patients and 12% never did. The differences between the two groups of hygienists were not statistically significant.

In contrast to fluorides, sealants were utilized infrequently as a preventive measure. Only 19% of the traditional and 28% of the nontraditional hygienists reported that they used sealants almost all the time for child

patients and almost one-third of the hygienists never used sealants for children. Correspondingly, 6% of the traditional and 15% of the nontraditional hygienists provided sealants almost all the time to adult patients and one-half of the nontraditional and two-thirds of the traditional hygienists never used sealants for adult patients. The differences in sealant use were not statistically significant.

The dental hygienists were more likely to recommend the use of home fluoride rinses and gels than fluoride supplements, which were never recommended by one-third to one-half of the hygienists. Nontraditional hygienists were somewhat more likely to recommend fluoride rinses than gels. The use of these preventive measures was not statistically different for the two groups of hygienists.

Patient Education

Fifty-four percent to 68% of the traditional hygienists and 58% to 81% of the nontraditional hygienists provided adult patients with information on caries, periodontal disease, flossing, and toothbrushing (Tables 35 and 36). Toothbrushing information was presented most frequently by both groups; however the nontraditional dental hygienists were statistically more likely to provide toothbrushing information at a greater frequency to adult patients than traditional hygienists (Table 44). Less than 50% of the nontraditional and less than 30% of the traditional hygienists provided instruction on the following "almost all the time": restorative/treatment needs; fluorides; toothbrushing in the mouth; sealants; sugar consumption; flossing in the mouth; antimicrobial agents; formal plaque control; and formal nutritional counseling. About 40% of the traditional hygienists and 30% of the nontraditional hygienists never recorded patient progress with instruction.

There were differences in the frequencies that education topics were provided to adult and child patients. The differences were more pronounced for nontraditional than traditional hygienists. Toothbrushing information again was the most frequently provided form of instruction. However, a statistically significant greater percentage of nontraditional hygienists reported that they seldom or never provided toothbrushing instruction to child patients than did traditional hygienists (Table 44). Formal plaque control and formal nutritional counseling programs were not likely to be provided to either adult or child patients. About 40% of all hygienists did not record children's progress with patient education instruction.

Group Instruction

Nontraditional hygienists were much more likely to provide group screening and instructional programs than were traditional dental hygienists (Table 37). Dental hygienists were slightly more likely to present child programs. Approximately 50% of the nontraditional hygienists provided group

programs versus 10% of the traditional hygienists. The differences for planning, providing, and evaluating group programs were statistically significant for the two groups for both child and adult patients (Table 44).

Miscellaneous Services

Except for sharpening instruments, which was done almost all the time, and inspecting and cleaning orthodontic and prosthetic appliances, which were done at middle levels of frequency, the remaining services investigated were done infrequently (Tables 38 and 39). A few statistically significant differences were noted for traditional and nontraditional dental hygienists (Table 44). For adult patients, nontraditional hygienists were more likely to place amalgam restorations, composite restorations, and periodontal dressings than were traditional hygienists. Nontraditional hygienists were also more likely to place composite restorations for child patients than traditional hygienists were.

Pain Control and Prescription Services

Pain control services varied widely in their use (Tables 40 and 41). Approximately one-third to one-half of the nontraditional and traditional hygienists, respectively, never used topical anesthesia for child patients in contrast to 18% and 19%, respectively, who never used topical anesthesia for adult patients. Traditional dental hygienists were much less likely to use nitrous oxide sedation for child patients than adult patients; however, nontraditional hygienists were equally likely to use nitrous oxide for child and adult patients. Nitrous oxide was more frequently used than were block and infiltration injections.

Two-thirds or more of the hygienists did not write prescriptions and did not provide medications. Nontraditional dental hygienists were statistically significantly more likely to provide prescription pain control medications for child and adult patients than were traditional hygienists (Table 44).

Management Activities

The dental hygienists' management activities were centered around the recall system (Tables 42 and 43). Nontraditional hygienists were statistically significantly more likely to schedule their own patients, train personnel, and evaluate personnel for adult patients than were traditional hygienists (Table 44). For child patients, nontraditional hygienists were statistically significantly more likely to evaluate personnel than traditional hygienists. However, overall, evaluation and training of personnel was infrequently done by both groups of dental hygienists.

## Typical Recall Appointment

The following summarizes the services provided in a typical recall appointment for child and adult patients by traditional and nontraditional dental hygienists. Minutes spent on service areas were obtained from the September 1985 survey; whereas, the frequency distributions for services investigated in the September 1986 survey were used to develop two cut off points: 1) 80% or more of the hygienists provide the procedure "almost all the time" and 2) 70% or more of the hygienists provide the service "almost all the time."

### Traditional Dental Hygiene Appointment for an Adult Recall Patient

Aproximately 45 minutes was allowed for the adult recall appointment with 1 to 5 minutes for examination of the patient, 21 to 45 minutes to scale and polish, and 0 to 5 minutes for patient education. Using the 80% cut off, the typical appointment consisted of a visual examination of the gingiva, charting carious lesions, scaling supragingivally and subgingivally with hand instruments, rubber cup polish, writing the treatment provided in the chart, and sharpening hand instruments. When the 70% cut off was employed, the following services were added: caries examination, visual intraoral soft tissue examination, review medical history, and determine recall interval.

### Nontraditional Dental Hygiene Appointment for an Adult Recall Patient

Approximately 45 minutes was allowed for the adult recall appointment with 1 to 5 minutes for examination of the patent, 21 to 45 minutes for scaling and polishing, and 6 to 10 minutes for patient education. Using the 80% cut off, the typical appointemnt included scaling supragingivally and subgingivally with hand instruments, rubber cup polish, toothbrushing information, writing the treatment provided in the chart, and sharpening hand instruments. When the 70% cut off was employed, the following services were added: visual gingival examination, review medical history, determining recall interval, and flossing information.

### Traditional Dental Hygiene Appointment for a Child Recall Patient

Approximately 30 minutes was allowed for the child recall appointment, with 1 to 5 minutes for examination, 15 to 20 minutes for scaling and polishing, 1 to 5 minutes for radiographs, and 1 to 5 minutes for topical fluoride applications. Using the 80% cut off, the typical appointment included a visual gingival examination, rubber cup polish, and writing the treatment provided in the chart. When the 70% cut off was used, the following services were added: caries examination, chart carious lesions, determine recall interval, scale supragingivally with hand instruments, topical fluoride applications, toothbrushing information, and sharpen hand instruments.

Nontraditional Dental Hygiene for Child Recall Patients

Approximately 30 minutes was allowed for the child recall patient, with 1 to 5 minutes for examination of the patient, 15 to 20 minutes for scaling and polishing, 1 to 5 minutes for radiographs, and 1 to 5 minutes for topical fluoride applications. Using the 80% cut off, the typical appointment consisted of writing the dental hygiene treatment provided in the chart. When the 70% cut off was employed, the following services were added: visual gingival examination, caries examination, chart carious lesions, topical fluoride application, rubber cup polish, scale supragingivally by hand, and toothbrushing information.

These typical appointment summaries highlight the similarities between the two groups of hygienists. Services which most clearly differentiated the nontraditional hygienists from the traditional hygienists were group programs and management activities (Table 44).

## Discussion/Summary

While the services provided by a dental hygienist can be influenced by many factors, the most important factors are 1) the dentists' decisions to include the services at the setting and to delegate the services to the dental hygienist, 2) the patients' need for the service and willingness to have and to pay for the service, and 3) the dental hygienists' competency and confidence to include a service in those she provides. Variation in services provided by the dental hygienists did exist; however, for the most part, a homogeneous picture of dental hygiene services emerged.

Early studies of dental hygienists suggested substantial involvement with secretarial and assisting duties.[1-4] Although a few hygienists in this study did spend most of the day doing management and/or assisting functions, most traditional hygienists spent about 90% of the day providing oral prophylaxis and chairside education and radiographic services (78% on prophylaxis and chairside education). While these figures are about 10% to 20% higher than those reported by others, they are not out of line, especially considering the differing methodologies, study emphases, and samples.[5,15,16,28]

Nontraditional hygienists spent about 84% of the day on these services. An exact comparison with the Maryland study[30] is not possible because of the differing categories and operationalization. The Maryland study asked how many hours per week the hygienist was involved in seven areas plus two write - in "other" areas. This researcher converted the hours per category to percents and combined categories to compare the two studies. Figures for the two studies were: 84% for prophylaxis and radiographic services in the cohort and 74% in the Maryland study; 0.7% for operative procedures in the cohort and 1.0% in the Maryland study; 3.9% for assisting in the cohort and 5.6% in the Maryland study; and 7.6% for management activities in the cohort and 14.4% in

the Maryland study. Given the methodological differences already discussed and the small number of nontraditional hygienists in the cohort, these findings are remarkably similar.

The frequency that services were performed had no counterpart in published national studies of all hygienists. One state study measured the frequency that 8 services were performed on a three point Likert-type scale: always, sometimes, and never.[8] It would have been better if the scale had more points to allow for greater differentiation of frequency.[32] Also, the selection of "always" as a category is suspect as it is too extreme and some respondents may have avoided that response choice. Another state study which investigated frequency that hygienists performed services was by Farrugia of 1980 graduates of the University of Michigan.[11] She investigated 21 services using a seven point scale which used a combination of relative and quantitative frequency: never, once a month or less, once a week to once a month, about once a week, several times a week, more than once a day, and with most patients. This attempt at quantifying degree of frequency is commendable, however, it appears that the scale is not balanced and is biased toward low frequencies. Even though there are methodological differences, these two studies will be contrasted with the traditional hygienists of the cohort study for adult patients.

Two services were identical for all three studies, apply topical fluoride and polish amalgams, and three were approximately the same: prophylaxis in one study and scale and polish in two studies, expose radiographs in one study and expose bitewing x-rays in two studies, and oral hygiene instruction in one study and toothbrushing instruction in two studies. The percentage of respondents stating the highest degree of frequency for oral prophylaxis were similar for the 3 studies: 96%, Johnson; 97%, Farrugia; and 98%, cohort. Johnson found a much lower percentage exposing bitewing x-rays at the highest frequency (33%) than did the cohort (60%) or Farrugia (79%) and applying topical fluorides, 8% (Johnson), 21% (Farrugia) and 27% (cohort). However, Johnson found a much higher percentage providing oral hygiene instructions at the highest frequency (81%) than the other two studies, which both found 68% at this level of frequency, and a higher percentage for polishing amalgam restorations at a high frequency (13%) than Farraugia found (3%) or than in this cohort study (6%).

The lowest level of frequency was stated as "never" in all three studies. For three services, the respondents from the three studies were quite similar: polish, 0% to 1%, expose radiographs, 4% to 5%; and oral hygiene instructions, 0% to 0.2%. Johnson and Farrugia found that 1% and 2%, respectively, never applied topical fluoride to adults but 18% of the cohort selected "never". Polishing amalgams was never done by 32% of the hygienists in Johnson's study, 57% in Farrugia's study, and 48% of the cohort.

The similarities among the three studies are noteworthy given the time, measurement, and sample differences. The differences found for bitewing x-rays and application of topical fluorides suggest that the cross-sectional sample of hygienists in West Virginia did not provide these services at as high a level of frequency as other hygienists provide them.

When the 17 services that matched between the Farrugia study and the cohort study were compared, the greatest differences were found for three services. The cohort was much more likely to take medical histories, periodontal chart, and perform soft tissue curettage than the hygienists in Farrugia's study. These differences are partially true differences, in contrast to error from differing methodologies, because the cohort includes hygienists from states which emphasize advanced peridontal procedures. The similarities on the other 14 services further indicate the apparent homogenity of dental hygiene practice.

An additional state study investigated services registered dental hygienists in Maryland in 1983 "typically" performed during "a new patient's initial dental hygiene appointment."[17] Thirteen services were investigated. The frequency "typically" was not defined in the report. Of the 13 services in that study, the cohort was asked about 5 for initial patient visits. The Maryland hygienists' "typically" responses were compared to the traditional dental hygienists "almost all the time" responses for adult patients. The Maryland scores were slightly higher for all 5 services. They found 76% "typically" performing a health history for new patients while in this study 72% did it almost all the time. Periodontal probing was perfomed at that frequency by 48% of the Maryland hygienists and 35% of the cohort. "Hard tissue exam" by Maryland hygienists was compared to caries examination by the cohort and the percentages were similar, 70% and 65% respectively. The remaining two services were extraoral examination and intraoral examination. The percentages for these services from the Maryland study were 58% and 82%, respectively. In the cohort study there were two measures of extraoral examination and three measures of intraoral examination. The extraoral visual percentage (46%) corresponded more closely with the Maryland extraoral examination percentage (58%), than the head and neck palpitation examination percentage (18%). Similarly, the visual gingival examination percentage (80%) corresponded more closely with the Maryland intraoral examination percentage (82%) than either the visual intraoral soft tissue examination (68%) or the intraoral soft tissue palpitation examination percentage (37%). While the similarities in these findings show consistency with which procedures are performed for dental hygiene patients, the additional information from the cohort study on intraoral and extraoral examination, as compared to the Maryland study, stress the need for explicitly stating what is being measured.

Four state studies investigated expanded fuctions: three reported "percent performing" and one "percent of dentists delegating." The number of

variables investigated varied from 3 to 11 and only one service, local anesthesia, was included in all 3 studies. Local anesthesia was performed by 5% to 88% of the hygienists. In the cohort study, about 30% used local anesthesia and only 8% used it "almost all the time." Three of the studies reported the following percentages for soft tissue curettage, 1.5%,[9] 54.2%,[10] and 86%.[12] Approximately 75% of the cohort performed soft tissue curettage, but only 19% very frequently. Three studies also reported on aspects of restorative services with amalgam. From 2% to 8% of the respondents placed and/or carved amalgam restorations. In the cohort study, 7% placed amalgam restorations and less than 1% did it "almost all the time." Two studies reported the percent placing sealants, 27%[9] and 28%.[10] Contrastingly, two thirds of the cohort placed sealants for child patients and 19% did it "almost all the time." These findings probably indicate the increased use of sealants in dental offices as well as the increased delegation of this service to dental hygienists.

The use of nitrous oxide was reported at 59% in the recent study of California hygienists.[12] This was similar to the 53% of the cohort who provided nitrous oxide (only 6% did so very frequently). Early national studies found that 12% to 15% of the hygienists included administering nitrous oxide as part of their duties.[1,3]

The national study of nontraditional dental hygienists reported the frequency that 19 services were performed.[30] A Likert-type scale with 4 frequency levels was used: never, rarely, occasionally, and routinely. This scale does not appear to be balanced and is biased toward low frequencies. The percentage who performed the 19 services "routinely" was reported for five patient age groups. The "school age" group was compared to "child" in the cohort study and "adult" to "adult", respectively. The findings for 17 services were:

| | Child | | Adult | |
|---|---|---|---|---|
| Maryland Service/Cohort Service | Maryland | Cohort | Maryland | Cohort |
| Oral Prophylaxis/Polish | 52% | 69% | 87% | 88% |
| Oral Hygiene Inst./Toothbrush Info. | 80% | 74% | 89% | 81% |
| Apply Topical Fluorides | 49% | 69% | 47% | 38% |
| Apply Sealants | 4% | 26% | 2% | 15% |
| Construct Mouthguards/for Bruxism | 1% | 4% | 2% | 4% |
| Record Vital Signs/Blood Pressure | 6% | 13% | 17% | 10% |
| Health and Dental History/Medical History | 40% | 61% | 70% | 73% |
| Extra Oral Exam/Extraoral-Visual | 34% | 44% | 45% | 42% |
| Intra Oral Exam/Gingiva-Visual | 44% | 78% | 56% | 73% |
| Deep Scaling and Root Planing/Root Plane | 5% | 9% | 56% | 54% |
| Soft Tissue Curettage | 4% | 4% | 19% | 19% |
| Finish and Polish Amalgam Rests./ Polish Amalg. | 5% | 4% | 5% | 4% |
| Place and Remove Temp. Rests./Place Temp. Rests. | 1% | 4% | 4% | 8% |

| Cont. Maryland Service/Cohort Service | Child | | Adult | |
|---|---|---|---|---|
| | Maryland | Cohort | Maryland | Cohort |
| Condense and Carve Amalg. Rests./ Place Amalg. Rests. | 1% | 4% | 1% | 8% |
| Place and Finish Composite Rests./ Place Comp. Rests. | 1% | 9% | 1% | 8% |
| Administer Local Anesthetics/Administer Infilt. | 1% | 4% | 5% | 4% |
| Administer Analgesia/Nitrous Oxide | 1% | 4% | 2% | 8% |

Even though the Maryland study included a much broader scope of nontraditional settings, a much larger sample size, and a different measure of frequency, there was an overall high level of consistency in the findings. The largest difference among the two groups was the very low frequency of use of sealants by the nontraditional hygienists in the Maryland sample.

The Maryland study also looked at nontraditional hygienists referral patterns.[30] Dental referrals were initiated by 83% of the hygienists and medical consultations or referrals by 88% of the hygienists. Both traditional and nontraditional hygienists in the cohort were more likely to consult the dentist than the physician and more likely to consult about, than refer, the patient. Nontraditional hygienists were more likely to consult and refer than traditional hygienists. As was stated in the Maryland study, and confirmed by notes written in the margin of questionnaires by cohort subjects, referrals and consultations were usually done by the dentist.

The number of minutes spent on services or groups of services has been reported in one study, which was conducted by the Research Triangle Institute in 1977.[5] Patient record visit forms were used by dental receptionists to record information on dental hygiene appointments. The average time in minutes for each service which had a charge was reported. The five services and corresponding times were: radiographs, 6 minutes; prophylaxis, 29 minutes; patient education, 10 minutes; fluoride treatment, 6 minutes; and nonsurgery periodontics per quadrant, 15 minutes. These services were not described.

Similarities were found between the services from the previous study[5] and service groups from the cohort study for four mutually included services or groups of services:

| Douglas Service/Cohort Service | Douglas | Cohort | |
|---|---|---|---|
| | All Patients | Child | Adult |
| Prophylaxis/Scale, Root Plane, Polish | 29 min. | 15-20 min. | 21-45 min. |
| Patient Education/Patient Education | 10 min. | -- | 0-10 min. |
| Fluoride Treatment/Topical Fluoride | 6 min. | 0-6 min. | -- |
| Radiographs/Taking Radiographs | 6 min. | 1-5 min. | -- |

The subjects in the cohort study were also asked about time spent on examination services. On the average, 1 to 5 minutes was allocated to examine child and adult patients. Considering the strong emphasis and importance placed on patient examinations in dental hygiene educational programs[33] and by this cohort when they were senior students,[31] 1 to 5 minutes seems to be minimal expenditure of time. Furthermore, as the frequency data indicated, the patient mainly received a visual examination of the gingiva. Perhaps hygienists need information about incorporating thorough patient examinations within the dental hygiene appointment. More total time may need to be allowed for the hygiene appointment.

Information gathered in the cohort study showed that most traditional and nontraditional hygienists scheduled adult recall patients for 45 minutes and child recall patients for 30 minutes. These findings are consistent with the average number of minutes reported 1) in 1977 for West Virginia hygienists - 43.4 min for adults and 27.9 minutes for children,[8], 2) in 1945 for Massachusett hygienists - 49 minutes for adults and 30 minutes for children,[6] 3) in 1985 for Maryland hygienists - 45 minutes for new patients,[17] 4) in 1982 for a national sample - 51 minutes,[5] and 5) in 1982 fcr a national sample - 31 to 45 minutes for adults and 16 to 30 minutes for children.[18] Since wide intervals were used in the latter study, it appears that slightly less time is allocated to hygiene services by that sample. However, when the frequency distributions from that study and the cohort study were compared, the distributions were similar, especially for adult appointments:

| ADHA-1982/Cohort | Child | | | Adult | | |
|---|---|---|---|---|---|---|
| | ADHA-1982 | | Cohort | ADHA-1982 | | Cohort |
| | Members | Nonmembers | All | Members | Nonmembers | All |
| | % | % | % | % | % | % |
| 15 min. or less/15 min. | 1.8 | 3.9 | 4.3 | 0.1 | 0.3 | -- |
| 16-30 min./30 min. | 64.6 | 75.6 | 81.2 | 10.1 | 16.0 | 9.8 |
| 31-45 min./45 min. | 29.9 | 18.2 | 13.2 | 54.1 | 49.7 | 59.5 |
| 46-60 min./60 min. | 3.7 | 2.7 | -- | 35.3 | 33.2 | 30.6 |
| More than 1 hr./75 min. | -- | 0.2 | -- | 0.4 | 0.7 | 0.1 |

The similarities in appointment time from study to study from 1945 to 1985 suggest that the time allocated to work the dental hygienist does during a patient visit has been constant and has not been significantly influenced by new technologies or changing disease patterns.

In summary, while there have been several studies of dental hygienists, only limited pieces of information about the dental hygienists' work has been reported. Comparisons across studies were hampered by inconsistencies in defining services and in measuring frequency of performance of services. Oral prophylaxis was used repeatedly but rarely defined. The use of Likert-type

scales without a midpoint which corresponded to a midlevel of frequency and without adequate degrees of distinction resulted in findings with limited scientific usefulness. The studies using observers, such as those reported by Bader[15] and Douglas,[5] should be encouraged, but with more detail on services. In addition to general service areas, attention should be given to the time spent on individual services.

Even though there were considerable methodological differences and weaknesses, comparisons across studies using the extremes of frequency yielded similarities. When services which were often referred to as traditional dental hygiene services - prophylaxis, oral health instructions, and topical fluorides were investigated, it was uniformly found that the majority of dental hygienists provide these services at highest levels of frequency. A high rate of agreement was also found for hygienists' provision of restorative services, placing and carving amalgam and composite restorations. These services were uniformly done at lowest levels of frequency. A mix of findings were associated with the more advanced periodontal procedures and pain control procedures. Soft tissue curettage and nitrous oxide showed state related variations. It appeared that sealant use is increasing. However, because few studies have included the same variables, conclusive statements are not possible and further research is warranted.

## Economics of Dental Hygiene Work

### Charges for Services - September 1986

For each of the services performed by the hygienist, the hygienist was asked to indicate the method of charging for the service: 1) no charge, 2) a separate charge, or 3) a cluster of services included in one charge. The method of charging was usually the same for child and adult patients. For the majority of services, the charge was part of a cluster fee for prophylaxis or there was no charge.

About 75% to 100% of all hygienists listed charges for scaling with the cluster prophylaxis and 50% to 70% listed charges for root planing, curettage, and gingivectomy with the cluster prophylaxis (Table 45). Over 99% of the hygienists included polishing teeth as part of the prophylaxis cluster. Thus, the majority of dental hygienists performed all services necessary to clean the teeth and debride diseased tissue as part of the prophylaxis fee. A t-test was calculated to see if hygienists who included all services within one "prophylaxis" fee charged more for the service "prophylaxis" than hygienists who had separate or other cluster fees in addition to the prophylaxis cluster. The difference between the two means was not statistically significant.

Cluster fees for scaling, root planing, and periodontal services were mentioned by two nontraditional hygienists for child patients and three for adult patients. Only two serivces were charged in this cluster by

nontraditional hygienists: root planing and curettage. Contrastingly, traditional hygienists included six services for children in this cluster and eleven for adults. The six services mentioned by 3 to 33 traditional hygienists were hand and ultrasonic subgingival scaling, ultrasonic supragingival scaling, gingivectomy, curettage, and root planing. One to 131 traditional hygienists included the following for adult patients: hand and ultrasonic subgingival and supragingival scaling, block and infiltration injections, nitrous oxide, topical anesthesia, gingivectomies, curettage, and root planing. Although a wider variety of services were included in the cluster by traditional hygienists, the majority of traditional and nontraditional hygienists included the same two functions - root planing and curettage in this cluster.

Method of charging for examination services varied somewhat from service to service so a range of percent stating the method of charge was calculated. From 60% to 75% of the nontraditional and from 45% to 60% of the traditional hygienists categorized fees for examination services as part of the prophylaxis cluster. Five percent to 20% of the nontraditional and 20% to 30% of the traditional dental hygienists listed charges for examination services as part of an examination cluster. Lastly, 10% to 25% of the nontraditional and 15% to 25% of the traditional hygienists stated they did examination services at no charge. Approximately 5% more of the hygienists stated that examination services were part of an examination cluster for an initial patient than for a recall patient. Charges for charting of examination services were categorized similarly to examination services.

Charges for consultations and referrals were considered to be done 1) at no charge by about 65% of the hygienists, 2) as part of the prophylaxis charge by about 30%, and 3) as part of the examination charge by approximately 5%. Treatment planning services were usually included at no charge (50%) or as part of the prophylaxis cluster (45%). Only about 5% of the hygienists listed treatment planning services as part of the examination cluster. About 66% of the nontraditional hygienists stated patient education was done at no charge and 33% as part of the prophylaxis cluster. The reverse was found for traditional hygienists: 60% prophylaxis and 40% no charge. Miscellaneous services, as well as writing prescriptions and/or providing medications, were also usually considered to be done at no charge (60% to 80%) or as part of the prophylaxis cluster (20% to 40%).

Pain control, radiographic, and diagnostic test services showed a different pattern of methods of charging with the separate charge category being significant, but not always the most frequently stated method of charging. About 5% to 20% of the hygienists indicated a separate charge for block and infiltration injections, and the remainder divided almost equally between no charge and prophylaxis cluster. Nitrous oxide was the pain control procedure most likely to have a separate charge. About 25% of the traditional

and 60% of the nontraditional hygienists charged a separate fee for nitrous oxide and the remainder of each group was about equally divided between no charge and prophylaxis fee. Diagnostic tests were usually listed at no charge (40% to 80%) or at a separate charge (2% to 65%). Twenty percent and fewer considered diagnostic tests as part of the prophylaxis cluster. The exposure of radiographs showed an even higher percentage stating a separate charge - about 95% for traditional hygienists and about 80% for nontraditional hygienists. Processing of x-rays was considered to be done at no charge.

Other individual services that frequently had a separate charge were sealants, topical fluoride applications, and mouth guards. Services that at least 10% of the hygienists who performed that service charged a separate fee are listed in Table 46.

Fees - September 1986

Hygienists were asked to include fees for all services with a separate charge and for cluster charges. If the fees listed were not clear or not complete, the respondent was contacted for clarification. A few hygienists were unable to complete the fee portion as they 1) did not know the fees, 2) participated in capitation programs, or 3) thought the fee system too complex because of a variety of fees depending on the patient's form of payment. Fees were not charged at some of the nontraditional settings.

Fees were key punched for 19 clusters and services for adult patients and 16 for child patients for traditional dental hygienists (Table 47) and nontraditional dental hygienists (Table 48). Several completed questionnaires were reviewed and confirmed that these services and clusters occurred most frequently. To key punch a fee for all 141 services, when most would have been blank, would have been too expensive in terms of key punching time and errors and computer storage space.

A few fee differences were noted between child and adult patients for traditional hygienists. The largest difference was the mean fee for prophylaxis: $23.52 for a child and $31.23 for an adult. Smaller differences of $4 or less were reported for plaque control fees, study model impressions, full mouth x-rays, and examinations. Of these services, plaque control fees was the only mean fee which was greater for child patients than adult patients.

Nontraditional hygienists also reported few fee differences for child and adult patients. Fee differences of greater than $2.00 included the following: prophylaxis - child mean fee was $23.38 and adult mean fee was $32.61; root plane - child mean fee was $32.00 and adult mean fee was $55.25; and emergency examination - child mean fee was $17.33 and adult mean fee was $20.33.

A wider range of fees was found for traditional hygienists and was expected because of the larger number of subjects in traditional settings. In

general, the average fees charged by hygienists working in traditional settings were within $1 to $8 of those charged by hygienists in nontraditional settings. Exceptions were found for very infrequently performed services where answers were based on 1 or 2 respondents.

Hygienists were asked to report the total amount of money generated from fees for dental hygiene services they performed on a typical work day. Total income generated on that day by traditional hygienists was as follows: mean = $352, standard deviation = $157, and median = $341. Corresponding statistics for nontraditional hygienists were: mean = $392, standard deviation = $211, and median = $356.

## Remuneration

Nontraditional hygienists were more likely to receive a pay increase in the past six months (63.6%) and to receive fringe benefits (81.5%) than were traditional hygienists -- 51.4% and 54.4%, respectively. (See Table 49). However, traditional hygienists received a higher mean daily wage ($106.27) than did nontraditional hygienists ($85.12). The range for wages for last day for traditional hygienists was $27 to $376 and for nontraditional hygienists it was $55 to $140. Since the hours worked varied, the average hourly wage was computed: wage per day divided by number of hours worked. Hourly wages varied from $6.30 to $47.00 for traditional hygienists and from $7.25 to $17.50 for nontraditional hygienists. Traditional hygienists earned a mean hourly wage of $14.16 and nontraditional a mean of $9.38. Since nontraditional hygienists were more likely to receive fringe benefits, the overall remuneration may be similar for the two groups.

The most common form of payment for all clinical dental hygienists was "salary" (Table 50). All nontraditional hygienists were salaried and 79.5% of traditional hygienists were paid by salary. Approximately 10% of traditional hygienists were paid by commission and 9% by salary plus commission.

Almost 88% of the nontraditional hygienists earned $12,500 to $24,999 per year whereas 69 percent of the traditional hygienists were in that income range (Table 51). The average yearly income of the traditional hygienists ($19,160) was slightly more than that of the nontraditional hygienists ($17,197).

## Payrate

To ascertain the hygienist's economic contribution to the setting an analysis of wages and income generated by dental hygiene services was used. As the number of hours worked increased, overall, the money generated and wages earned increased (Table 52). More strikingly, for both money generated and wages earned, the variation was extremely large. Some hygienists earned more working 3 to 4 hours than what other hygienists earned working 9 to 10 hours.

The ratio of wages earned to income generated (payrate) was calculated for each dental hygienist and is summarized in Table 53. In general, the ratios were biased upward because of prepayment and insurance programs and assisting and management duties performed by the hygienists. For some hygienists, 30% to 70% of the work day involved duties other than direct patient services.

For traditional hygienists, the ratio of wages to fees generated varied from 7.5% to 163.0% with a mean of 33.2% and a median of 30.9%. The nontraditional hygienists' wages varied from 16.5% to 140.0% of what their fees totaled. The mean was 36.4% and the median was 23.1% for nontraditional hygienists.

## Discussion/Summary

Charges for frequently performed dental hygiene services were usually included in one "prophylaxis" cluster fee. The exceptions to this were radiographs and topical fluorides, which had separate fees, and sealants, root planing and curettage, which were performed at intermediate levels of frequency and either had a separate charge or were part of another cluster fee. Douglas also found only a few services provided by dental hygienists had fees.[5] The dental hygiene services he listed as having a charge were radiographs, prophylaxis, patient education, fluoride treatment, and nonsurgery periodontics. Although patient education was listed as having a charge, the mean was very low, which indicated not many offices charged a fee. This study also found very few offices - 2 or fewer - charged for toothbrushing and flossing instructions.

The dollar amounts of 1977 fees reported by Douglas[5] were about half the amounts of the ones found in this study. No other publication of dental hygiene fees was located. The American Dental Association recently published fees charged by general practitioners in 1985.[21] Twelve services could be compared to the fees reported by traditional dental hygienists for adult patients. The general practitioners' mean fees were $1 to $5 lower than the mean fees reported in this study for the following services: recall or periodic examination, emergency examination, oral prophylaxis, full mouth x-rays, bitewing x-rays, and panorex x-rays. The mean fees were within 30 cents for sealants and single periapical x-rays. Services which had a greater fee reported by general practitioners were: topical fluoride application ($2 difference), one quadrant of root planing ($2 difference), curettage ($22 difference), and gingivectomy (about $90 difference). For frequently performed services, the means are very similar. Equally important to the similarity of the means, both studies found large standard deviations, which indicate the wide variation in fees charged for each service.

The mean hourly wage of $14.16 reported by the traditional hygienists in 1986 was more than the mean hourly wage of $10.11 reported by dental hygienists in 1984 and the mean hourly wage of $12.48 that dentists reported

they paid hygienists in 1984. The average hourly salary of $9.38 reported by nontraditional hygienists was similar to the $9.50 per hour reported by nontraditional hygienists in 1983 in the Maryland study.[30] The per diem pay of $106.27 of the traditional hygienists was very close to the per diem reported for dental hygienists in 1986 in Dental Management.[34] It would appear that traditional dental hygienists income increased in the last two years and that nontraditional hygienists did not. However, the number of nontraditional hygienists in the cohort is small and is comprised of recent graduates and therefore is probably not representative of all nontraditional hygienists. Hourly pay is only one portion of remuneration. For 81% of the nontraditional hygienists, fringe benefits added to their pay. Only 54% of the traditional hygienists said they received fringe benefits. This percentage is not out of line with that reported in 1979[23] and 1977.[8] However, most studies asked percentage receiving types of benefits which makes comparisons more difficult as percentages total more than 100%. The 1986 survey of dentists reported an average annual expenditure for benefits of $1,379 per year per employee.[35] Less than $500 per year per employee was spent by 26% of the dentists and only 10% spent $3000 or more for benefits per year per employee. These figures reinforce that for many traditional dental hygienists, the remuneration is limited to the salary or commission paid.

The percent of hygienists paid by commission was slightly less than that reported in earlier national studies.[4,13,18,23,24] Whether this indicates a change in how hygienists are paid or that new graduates are less likely to be on commission than a cross-sectional sample of hygienists can not be ascertained.

The distribution of total yearly income was similar to that reported by the 1984 ADHA study.[25] The cohort had fewer at the lowest end of the distribution and slightly more at the upper end of the distribution.

The wages the hygienist received were approximately one-third of the money generated from fees for hygiene services. Although standards do not exist as to what to charge for dental hygiene services or what to pay dental hygienists, some practice management materials suggest that initial examination and routine procedure fees are services which are "sensitive."[35] New patients may not enter the office if initial fees are high; and if fees increase frequently on routine procedures, patients will notice it.

Sarner states that the crucial factor in the economics of use of auxiliary personnel is whether the dentist can use the time saved by use of the auxiliary to produce enough income to exceed all the expenses of the auxiliary.[36] In regards to the dental hygienist, this health care provider is seen as the person to assign procedures which produce less than average income for the dentist and thus free the dentist to perform the higher producing procedures.[15,36] Bader goes as far as to call hygiene services a

"loss leader" in terms of rate of return for time spent. He basis this statement on his study of 13 dental practices.[15] On the average in these practices, hygiene services accounted for one quarter of all production and only one eighth of total gross billings. It is interesting that writers on the economics of dental practice do not suggest that the fees for preventive services be raised or that the dental hygienist should earn a portion of the higher fee services the dentist has been freed to perform.

## GENERAL DISCUSSION

### Reliability and Validity

Many factors influence the design of a study and the investigator tries to balance these factors to achieve meaningful results. Two aspects of design, which are often addressed, are reliability and validity.

To paraphrase Carmines and Zeller,[37] reliability is the extent to which a measuring procedure yields the same results on repeated trials. While repeated measurements of the same phenomenon never precisely duplicate each other, they do tend to be consistent from measurement to measurement. Thus, it is the tendency toward consistency, rather than totally error-free measurement, that is referred to as reliability. Reliability is reflected in survey research by random errors such as those due to coding, ambiguous instructions, differential emphasis on different words during an interview, respondent fatigue, and the like.

A measuring device is considered valid if it does what it is intended to do for the use to which it is being put. Validity, like relaibility, is a matter of degree and is not an all-or-none property. At the center of validity is nonrandom error. Unlike random error, nonrandom error has a systematic biasing effect on measuring instruments and therefore prevents indicators from representing the intended concept. Validity is usually more of a theoretically oriented issue than is reliability.

### Tests for Reliability and Validity

The following procedures were used to enhance reliability by minimizing random errors. The instrument was pretested to determine if instructions and concepts were clear. Responses were checked and returned to the respondent if incomplete. All coding was verified. "Outliers" were investigated and corrected information entered.

Reliability was also tested by comparing nonrespondents to respondents and by splitting the respondents into two groups and testing for significant differences in answers. Nonrespondents and respondents to the 1986 survey were compared on their answers to 45 variables on the 1985 survey. These 45 variables included demographic characteristics, frequency and characteristics of dental hygiene work, and information on the work place. There were no statistically significant differences at the .05 level of significance. Twenty variables were used to compare two groups of 1986 respondents. One statistically significant difference resulted: one group saw an average of 2 child patients and the other group saw an average of 3 child patients. The tests run indicate that the respondents are representative of the total sample and the data have adequate reliability.

In this study, respondents were asked to report on items which appeared to have face validity.[32] In determining the validity of the questionnaire, an

important aspect is whether the content defines the variable measured.[37] The list of services was extensive and was thought to cover all areas of clinical dental hygiene work except preparation of the operatory and instruments. In case the 141 items listed were not exhaustive, an open-ended, "other" category was included. Only 4 respondents wrote in other work. This limited response and the range of frequencies reported for the 141 items indicate that the items did reflect the scope of clinical dental hygiene work.

## Limitations

The 1986 questionnaire was long and several respondents (15% to 20%) did not answer large portions of the questionnaire. However, as presented above, the reliability of the data was not effected by the no answers. To prevent overwhelming subjects with long questionnaires, alternative questionnaires which have sections of information could be developed and sent to random samples of the population.

The services selected appeared to measure the broad scope of dental hygiene practice. However, the Likert-type scale of frequency could be interpreted differently by different respondents. While it was probably accurate as a relative measure, consideration should be given to quantifying the levels of frequency. Perhaps descriptors which include number or percent of patients seen in a day or a week could be developed for each level of a scale.

Information requested on fees was confusing to some respondents. This was partially due to the large number of services included in the prophylaxis fee. Also, some respondents may have listed an examination fee when there was no fee for the examination provided by the dental hygienist but was a fee for the examination provided by the dentist. This is an area which needs clarified with additional research.

Although the clinical practices of traditional and nontraditional dental hygienists were similar, greater differences may have resulted if additional, or a different mix, of nontraditional settings had been included. Attention needs to be given to defining nontraditional settings. However, rather than clinical services, the greatest variation probably would be the purpose or orientation of dental hygiene work in the nontraditional settings. For example, in public schools education and screenings may constitute dental hygiene work rather than clinical services.

## Summary of Findings

1. Approximately 5% of the respondents selected employment in nontraditional clinical settings.

2. More nontraditional hygienists were never married (42.4%) than were traditional hygienists (26.0%).

3. More nontraditional hygienists attended continuing education programs than traditional hygienists.

4. Baccalaureate hygienists were more likely to be employed in nontraditional settings than were associate/certificate hygienists.

5. Hygienists in the Western United States were least likely to be employed in nontraditional settings.

6. Similar types of dental personnel were employed at traditional and nontraditional settings but the average number of each type of personnel was larger for nontraditional settings. Traditional settings were slightly more likely to employ dental assistants who provide direct patient services than nontraditional settings.

7. Dental receptionist functions were the main form of assistance hygienists had with patient care and traditional hygienists were more likely to receive this assistance than nontraditional hygienists.

8. Nontraditional hygienists reported less dentist involvement with dental hygiene services than traditional hygienists did.

9. Both groups of hygienists worked an average of 8 hours per day but nontraditional hygienists worked 4.2 days per week and traditional hygienists worked 3.5 days per week at this one site.

10. On the average, all clinical hygienists spent 78% of the work day providing oral prophylaxis and chairside education.

11. Nontraditional hygienists provided more chairside assisting than traditional hygienists. Traditional hygienists provided more radiographic services than nontraditional hygienists.

12. On the average, all clinical hygienists had 45 minute adult recall appointments and 30 minute child recall appointments.

13. Health history and examinations took 1 to 5 minutes to complete. The major service was a visual examination of the gingiva.

14. Patient education took 10 minutes or less and mainly consisted of toothbrushing information.

15. Polishing and scaling constituted the bulk of the dental hygiene appointment.

16. Topical fluoride applications were provided much more frequently than sealants.

17. The most frequently provided examination services were visual gingival examination, visual soft tissue examination, caries examination, and medical history.

18. Most dental hygienists (88% or more) recorded the work they provided in the patient's chart.

19. Almost 95% of the hygienists provided radiographic services, but other diagnostic tests and services were done infrequently.

20. Dental hygienists were likely to consult the dentist about patient treatment.

21. Pain control procedures were not usually provided by the dental hygienists.

22. Although most dental hygienists did not provide group programs or management services very frequently, nontraditional hygienists did provide them more frequently than traditional hygienists did.

23. Most services performed by the dental hygienists were done as part of the prophylaxis fee or at no charge.

24. The average prophylaxis fees were: $23.52 for a child and $31.23 for an adult for traditional hygienists and $23.38 for a child and $32.61 for an adult for nontraditional hygienists.

25. The average daily wage for traditional hygienists was $106.27 and for nontraditional hygienists, $85.12. The mean hourly wages were $14.16 and $9.38, respectively.

26. Almost 80% of the traditional hygienists were salaried and all of the nontraditional hygienists were salaried.

27. The average amount of money generated in one day was $352.30 for traditional hygienists and $392.30 for nontraditional hygienists.

28. The average "payrate" for traditional hygienists was 33.2% and for nontraditional hygienists it was 36.4%.

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APPENDIX A - Detailed Frequency Tables - Adults 1985

Table 1FA Frequency that Clinical Dental Hygienists Provided Radiographs for Adult Recall Patients

| Frequency | Traditional Clinical Hygienists No. | % | Nontraditional Clinical Hygienists No. | % | All Clinical Dental Hygienists No. | % |
|---|---|---|---|---|---|---|
| Almost All the Time | 356 | 53.5 | 11 | 33.3 | 367 | 52.5 |
| Most of the Time | 178 | 26.7 | 6 | 18.2 | 184 | 26.3 |
| Sometimes | 89 | 13.4 | 5 | 15.2 | 94 | 13.4 |
| Seldom | 26 | 3.9 | 8 | 24.2 | 34 | 4.9 |
| Never | 17 | 2.6 | 3 | 9.1 | 20 | 2.9 |
| Total | 666 | 100.1 | 33 | 100.0 | 699 | 100.0 |

Table 2FA Frequency that Clinical Dental Hygienists Placed Restorations for Adult Recall Patients

| Frequency | Traditional Clinical Hygienists No. | % | Nontraditional Clinical Hygienists No. | % | All Clinical Dental Hygienists No. | % |
|---|---|---|---|---|---|---|
| Almost All the Time | - | - | - | - | - | - |
| Most of the Time | - | - | - | - | - | - |
| Sometimes | 30 | 4.5 | 1 | 3.9 | 31 | 4.5 |
| Seldom | 68 | 10.3 | 5 | 15.2 | 73 | 19.5 |
| Never | 563 | 85.2 | 27 | 81.8 | 590 | 85.0 |
| Total | 661 | 100.0 | 33 | 100.0 | 694 | 100.0 |

Table 3FA Frequency that Clinical Dental Hygienists Polished Restorations for Adult Recall Patients

| Frequency | Traditional Clinical Hygienists No. | % | Nontraditional Clinical Hygienists No. | % | All Clinical Dental Hygienists No. | % |
|---|---|---|---|---|---|---|
| Almost All the Time | 27 | 4.1 | - | - | 27 | 3.9 |
| Most of the Time | 35 | 5.3 | 1 | 3.0 | 36 | 5.2 |
| Sometimes | 134 | 20.2 | 12 | 36.4 | 146 | 20.9 |
| Seldom | 194 | 29.2 | 9 | 27.3 | 203 | 29.1 |
| Never | 275 | 41.4 | 11 | 33.3 | 286 | 41.0 |
| Total | 665 | 100.2 | 33 | 100.0 | 698 | 100.1 |

Table 4FA Frequency that Clinical Dental Hygienists Provided Topical Fluoride Applications for Adult Recall Patients

| Frequency | Traditional Clinical Hygienists No. | % | Nontraditional Clinical Hygienists No. | % | All Clinical Dental Hygienists No. | % |
|---|---|---|---|---|---|---|
| Almost All the Time | 198 | 29.8 | 7 | 21.2 | 205 | 29.4 |
| Most of the Time | 59 | 8.4 | 3 | 9.1 | 62 | 8.9 |
| Sometimes | 150 | 22.6 | 8 | 24.2 | 158 | 22.7 |
| Seldom | 178 | 26.8 | 11 | 33.3 | 189 | 27.1 |
| Never | 79 | 11.9 | 4 | 12.1 | 83 | 11.9 |
| Total | 664 | 100.0 | 33 | 99.9 | 697 | 100.0 |

Table 5FA Frequency that Clinical Dental Hygienists Provided Sealants for Adult Recall Patients

| Frequency | Traditional Clinical Hygienists No. | % | Nontraditional Clinical Hygienists No. | % | All Clinical Dental Hygienists No. | % |
|---|---|---|---|---|---|---|
| Almost All the Time | 44 | 6.6 | 1 | 3.0 | 45 | 6.5 |
| Most of the Time | 29 | 4.4 | 1 | 3.0 | 30 | 4.3 |
| Sometimes | 83 | 12.5 | 3 | 9.1 | 86 | 12.3 |
| Seldom | 106 | 15.9 | 8 | 24.2 | 114 | 16.3 |
| Never | 403 | 60.6 | 20 | 60.6 | 423 | 60.6 |
| Total | 665 | 100.0 | 33 | 99.9 | 698 | 100.0 |

Table 6FA Frequency that Clinical Dental Hygienists Provided Nutritional Counseling for Adult Recall Patients

| Frequency | Traditional Clinical Hygienists No. | % | Nontraditional Clinical Hygienists No. | % | All Clinical Dental Hygienists No. | % |
|---|---|---|---|---|---|---|
| Almost All the Time | 38 | 5.7 | 1 | 3.0 | 39 | 5.6 |
| Most of the Time | 34 | 5.1 | 1 | 3.0 | 35 | 5.1 |
| Sometimes | 186 | 28.1 | 10 | 30.3 | 196 | 28.2 |
| Seldom | 227 | 34.3 | 10 | 30.3 | 237 | 34.2 |
| Never | 176 | 26.6 | 11 | 33.3 | 187 | 26.9 |
| Total | 661 | 99.8 | 33 | 99.9 | 694 | 100.0 |

Table 7FA Frequency that Clinical Dental Hygienists Provided Curettage for Adult Recall Patients

| Frequency | Traditional Clinical Hygienists No. | % | Nontraditional Clinical Hygienists No. | % | All Clinical Dental Hygienists No. | % |
|---|---|---|---|---|---|---|
| Almost All the Time | 88 | 13.3 | 1 | 3.0 | 89 | 12.8 |
| Most of the Time | 74 | 11.2 | 3 | 9.1 | 77 | 11.1 |
| Sometimes | 182 | 27.5 | 15 | 45.5 | 197 | 28.3 |
| Seldom | 116 | 17.5 | 7 | 21.2 | 123 | 17.7 |
| Never | 202 | 30.5 | 7 | 21.2 | 209 | 30.1 |
| Total | 662 | 100.0 | 33 | 100.0 | 695 | 100.0 |

Table 8FA Frequency that Clinical Dental Hygienists Root Planed for Adult Recall Patients

| Frequency | Traditional Clinical Hygienists No. | % | Nontraditional Clinical Hygienists No. | % | All Clinical Dental Hygienists No. | % |
|---|---|---|---|---|---|---|
| Almost All the Time | 226 | 34.0 | 4 | 12.1 | 230 | 33.0 |
| Most of the Time | 194 | 29.2 | 8 | 24.2 | 202 | 29.0 |
| Sometimes | 187 | 28.2 | 18 | 54.5 | 205 | 29.4 |
| Seldom | 38 | 5.7 | 3 | 9.1 | 41 | 5.9 |
| Never | 19 | 2.9 | - | - | 19 | 2.7 |
| Total | 664 | 100.0 | 33 | 99.9 | 697 | 100.0 |

Table 9FA Frequency that Clinical Dental Hygienists Provided Gingivectomies for Adult Recall Patients

| Frequency | Traditional Clinical Hygienists No. | % | Nontraditional Clinical Hygienists No. | % | All Clinical Dental Hygienists No. | % |
|---|---|---|---|---|---|---|
| Almost All the Time | 1 | 0.2 | - | - | 1 | 0.1 |
| Most of the Time | 4 | 0.6 | - | - | 4 | 0.6 |
| Sometimes | 16 | 0.6 | 1 | 3.0 | 17 | 2.4 |
| Seldom | 36 | 5.4 | 3 | 9.1 | 39 | 5.6 |
| Never | 606 | 91.4 | 29 | 87.9 | 635 | 91.2 |
| Total | 663 | 100.0 | 33 | 100.0 | 696 | 99.9 |

Table 10FA Frequency that Clinical Dental Hygienists Provided Chemical Curettage for Adult Recall Patients

| Frequency | Traditional Clinical Hygienists No. | % | Nontraditional Clinical Hygienists No. | % | All Clinical Dental Hygienists No. | % |
|---|---|---|---|---|---|---|
| Almost All the Time | 8 | 1.2 | - | - | 8 | 1.2 |
| Most of the Time | 5 | 0.8 | - | - | 5 | 0.7 |
| Sometimes | 25 | 3.8 | 1 | 3.0 | 26 | 3.7 |
| Seldom | 30 | 4.5 | 2 | 6.1 | 32 | 4.6 |
| Never | 593 | 89.7 | 30 | 90.9 | 623 | 89.8 |
| Total | 661 | 100.0 | 33 | 100.0 | 694 | 100.0 |

Table 11FA Frquency that Clinical Dental Hygienists Administered Nitrous Oxide for Adult Recall Patients

| Frequency | Traditional Clinical Hygienists No. | % | Nontraditional Clinical Hygienists No. | % | All Clinical Dental Hygienists No. | % |
|---|---|---|---|---|---|---|
| Almost All the Time | 17 | 2.6 | - | - | 17 | 2.4 |
| Most of the Time | 28 | 4.2 | 1 | 3.0 | 29 | 4.2 |
| Sometimes | 167 | 25.1 | 2 | 6.1 | 169 | 24.2 |
| Seldom | 120 | 18.0 | 4 | 12.1 | 124 | 17.8 |
| Never | 333 | 50.1 | 26 | 78.8 | 359 | 51.4 |
| Total | 665 | 100.0 | 33 | 100.0 | 698 | 100.0 |

Table 12FA Frequency that Clinical Dental Hygienists Administered Local Anesthesia for Adult Recall Patients

| Frequency | Traditional Clinical Hygienists No. | % | Nontraditional Clinical Hygienists No. | % | All Clinical Dental Hygienists No. | % |
|---|---|---|---|---|---|---|
| Almost All the Time | 19 | 2.9 | - | - | 19 | 2.7 |
| Most of the Time | 42 | 6.3 | 1 | 3.0 | 43 | 6.2 |
| Sometimes | 101 | 15.2 | 6 | 18.2 | 107 | 15.4 |
| Seldom | 41 | 6.2 | 1 | 3.0 | 42 | 6.0 |
| Never | 460 | 69.4 | 25 | 75.8 | 485 | 69.7 |
| Total | 663 | 100.0 | 33 | 100.0 | 696 | 100.0 |

Table 13FA Frequency that Clinical Dental Hygienists Removed Overhanging Margins for Adult Recall Patients

| Frequency | Traditional Clinical Hygienists | | Nontraditional Clinical Hygienists | | All Clinical Dental Hygienists | |
|---|---|---|---|---|---|---|
| | No. | % | No. | % | No. | % |
| Almost All the Time | 35 | 5.3 | 1 | 3.0 | 36 | 5.2 |
| Most of the Time | 65 | 9.8 | 1 | 3.0 | 66 | 9.5 |
| Sometimes | 236 | 35.5 | 15 | 45.5 | 251 | 36.0 |
| Seldom | 148 | 22.3 | 9 | 27.3 | 157 | 22.5 |
| Never | 180 | 27.1 | 7 | 21.2 | 187 | 26.8 |
| Total | 664 | 100.0 | 33 | 100.0 | 697 | 100.0 |

APPENDIX B - Detailed Frequency Tables - Children 1985

Table 1FC Frequency that Clinical Dental Hygienists Provided Radiographs for Child Recall Patients

| Frequency | Traditional Clinical Hygienists No. | % | Nontraditional Clinical Hygienists No. | % | All Clinical Dental Hygienists No. | % |
|---|---|---|---|---|---|---|
| Almost All the Time | 313 | 50.6 | 8 | 29.6 | 321 | 49.8 |
| Most of the Time | 158 | 25.6 | 8 | 29.6 | 166 | 25.7 |
| Sometimes | 92 | 14.9 | 6 | 22.2 | 98 | 15.2 |
| Seldom | 37 | 6.0 | 3 | 11.1 | 40 | 6.2 |
| Never | 18 | 2.9 | 2 | 7.4 | 20 | 3.1 |
| Total | 618 | 100.0 | 27 | 99.9 | 645 | 100.0 |

Table 2FC Frequency that Clinical Dental Hygienists Placed Restorations for Child Recall Patients

| Frequency | Traditional Clinical Hygienists No. | % | Nontraditional Clinical Hygienists No. | % | All Clinical Dental Hygienists No. | % |
|---|---|---|---|---|---|---|
| Almost All the Time | 2 | 0.3 | - | - | 2 | 0.3 |
| Most of the Time | 1 | 0.2 | - | - | 1 | 0.2 |
| Sometimes | 22 | 3.6 | - | - | 22 | 3.4 |
| Seldom | 46 | 7.4 | 3 | 11.1 | 49 | 7.6 |
| Never | 547 | 88.5 | 24 | 88.9 | 571 | 88.5 |
| Total | 618 | 100.0 | 27 | 100.0 | 645 | 100.0 |

Table 3FC Frequency that Clinical Dental Hygienists Polished Restorations for Child Recall Patients

| Frequency | Traditional Clinical Hygienists No. | % | Nontraditional Clinical Hygienists No. | % | All Clinical Dental Hygienists No. | % |
|---|---|---|---|---|---|---|
| Almost All the Time | 22 | 3.6 | - | - | 22 | 3.4 |
| Most of the Time | 23 | 3.7 | - | - | 23 | 3.6 |
| Sometimes | 86 | 13.9 | 8 | 29.6 | 94 | 14.6 |
| Seldom | 124 | 20.1 | 6 | 22.2 | 130 | 20.2 |
| Never | 362 | 58.7 | 13 | 48.1 | 375 | 58.2 |
| Total | 617 | 100.0 | 27 | 100.0 | 644 | 100.0 |

Table 4FC Frequency that Clinical Dental Hygienists Provided Topical Fluoride Applications for Child Recall Patients

| Frequency | Traditional Clinical Hygienists No. | % | Nontraditional Clinical Hygienists No. | % | All Clinical Dental Hygienists No. | % |
|---|---|---|---|---|---|---|
| Almost All the Time | 504 | 81.6 | 22 | 81.5 | 526 | 81.6 |
| Most of the Time | 55 | 8.9 | 4 | 14.8 | 59 | 9.1 |
| Sometimes | 23 | 3.7 | 1 | 3.7 | 24 | 3.7 |
| Seldom | 14 | 2.3 | - | - | 14 | 2.2 |
| Never | 22 | 3.6 | - | - | 22 | 3.4 |
| Total | 618 | 100.1 | 27 | 100.0 | 645 | 100.0 |

Table 5FC Frequency that Clinical Dental Hygienists Placed Sealants for Child Recall Patients

| Frequency | Traditional Clinical Hygienists No. | % | Nontraditional Clinical Hygienists No. | % | All Clinical Dental Hygienists No. | % |
|---|---|---|---|---|---|---|
| Almost All the Time | 106 | 17.2 | 3 | 11.1 | 109 | 16.9 |
| Most of the Time | 99 | 16.0 | 7 | 25.9 | 106 | 16.4 |
| Sometimes | 109 | 17.6 | 4 | 14.8 | 113 | 17.5 |
| Seldom | 44 | 7.1 | 3 | 11.1 | 47 | 7.3 |
| Never | 260 | 42.1 | 10 | 37.0 | 270 | 41.9 |
| Total | 618 | 100.0 | 27 | 100.0 | 645 | 100.0 |

Table 6FC Frequency that Clinical Dental Hygienists Provided Nutritional Counseling for Child Recall Patients

| Frequency | Traditional Clinical Hygienists No. | % | Nontraditional Clinical Hygienists No. | % | All Clinical Dental Hygienists No. | % |
|---|---|---|---|---|---|---|
| Almost All the Time | 59 | 9.6 | 5 | 18.5 | 64 | 10.0 |
| Most of the Time | 120 | 19.5 | 3 | 11.1 | 123 | 19.1 |
| Sometimes | 196 | 31.8 | 10 | 37.0 | 206 | 32.0 |
| Seldom | 115 | 18.7 | 3 | 11.1 | 118 | 18.4 |
| Never | 126 | 20.5 | 6 | 22.2 | 132 | 20.5 |
| Total | 616 | 100.1 | 27 | 99.9 | 643 | 100.0 |

Table 7FC Frequency that Clinical Dental Hygienists Provided Patient Education for Child Recall Patients

| Frequency | Traditional Clinical Hygienists No. | % | Nontraditional Clinical Hygienists No. | % | All Clinical Dental Hygienists No. | % |
|---|---|---|---|---|---|---|
| Almost All the Time | 432 | 69.8 | 18 | 66.7 | 450 | 69.7 |
| Most of the Time | 154 | 24.9 | 7 | 25.9 | 161 | 24.9 |
| Sometimes | 28 | 4.5 | 2 | 7.4 | 30 | 4.6 |
| Seldom | 5 | 0.8 | - | - | 5 | 0.8 |
| Never | - | - | - | - | - | - |
| Total | 619 | 100.0 | 28 | 100.0 | 646 | 100.0 |

Table 8FC Frequency that Clinical Dental Hygienists Administered Local Anesthesia for Child Recall Patients

| Frequency | Traditional Clinical Hygienists No. | % | Nontraditional Clinical Hygienists No. | % | All Clinical Dental Hygienists No. | % |
|---|---|---|---|---|---|---|
| Almost All the Time | 8 | 1.3 | - | - | 8 | 1.2 |
| Most of the Time | 8 | 1.3 | - | - | 8 | 1.2 |
| Sometimes | 31 | 5.0 | 1 | 3.7 | 32 | 5.0 |
| Seldom | 44 | 7.1 | 1 | 3.7 | 45 | 7.0 |
| Never | 526 | 85.3 | 25 | 92.6 | 551 | 85.6 |
| Total | 617 | 100.0 | 27 | 100.0 | 644 | 100.0 |

Table 9FC Frequency that Clinical Dental Hygienists Administered Nitrous Oxide for Child Recall Patients

| Frequency | Traditional Clinical Hygienists No. | % | Nontraditional Clinical Hygienists No. | % | All Clinical Dental Hygienists No. | % |
|---|---|---|---|---|---|---|
| Almost All the Time | 8 | 1.3 | - | - | 8 | 1.2 |
| Most of the Time | 7 | 1.1 | - | - | 7 | 1.1 |
| Sometimes | 50 | 8.1 | 2 | 7.4 | 52 | 8.1 |
| Seldom | 79 | 12.8 | 2 | 7.4 | 81 | 12.6 |
| Never | 473 | 76.7 | 23 | 85.2 | 496 | 77.0 |
| Total | 617 | 100.0 | 27 | 100.0 | 644 | 100.0 |

Table 1 Demographic and General Characteristics of Respondents - 1986

| | All Respondents | | Traditional | | Nontraditional | |
|---|---|---|---|---|---|---|
| | N | % | N | % | N | % |
| Marital Status | | | | | | |
| Never Married | 208 | 27.2 | 153 | 26.0 | 14 | 42.4 |
| Married | 515 | 67.2 | 400 | 68.0 | 16 | 48.5 |
| Widowed | 5 | 0.7 | 2 | 0.3 | - | - |
| Separated | 4 | 0.5 | 3 | 0.5 | 1 | 3.0 |
| Divorced | 34 | 4.4 | 30 | 5.1 | 2 | 6.1 |
| Total | 766 | 100.0 | 588 | 99.9 | 33 | 100.0 |
| Age | | | | | | |
| 22-24 | 109 | 14.2 | 85 | 14.5 | 6 | 18.2 |
| 25-29 | 507 | 66.2 | 388 | 66.0 | 20 | 60.6 |
| 30-34 | 82 | 10.7 | 66 | 11.2 | 3 | 9.1 |
| 35-39 | 44 | 5.7 | 32 | 5.4 | 3 | 9.1 |
| 40-49 | 23 | 3.0 | 16 | 2.7 | 1 | 3.0 |
| 50-59 | 1 | 0.1 | 1 | 0.2 | - | - |
| Total | 766 | 100.0 | 588 | 100.0 | 33 | 100.0 |
| Sex | | | | | | |
| Female | 762 | 99.5 | 584 | 99.3 | 33 | 100.0 |
| Male | 4 | .5 | 4 | .7 | - | - |
| Total | 766 | 100.0 | 588 | 100.0 | 33 | 100.0 |
| Number of Children | | | | | | |
| 0 | 516 | 67.4 | 411 | 69.9 | 25 | 75.8 |
| 1 | 138 | 18.0 | 105 | 17.9 | 4 | 12.1 |
| 2 | 89 | 11.6 | 57 | 9.7 | 2 | 6.1 |
| 3 | 17 | 2.2 | 10 | 1.7 | 2 | 6.1 |
| 4 | 4 | .5 | 3 | 0.5 | - | - |
| 5 | 2 | .3 | 2 | 0.3 | - | - |
| Total | 766 | 100.0 | 588 | 100.0 | 33 | 100.1 |
| Enrolled in Formal Education Program | | | | | | |
| Yes | 94 | 12.3 | 52 | 8.8 | 3 | 9.1 |
| No | 672 | 87.7 | 536 | 91.2 | 30 | 90.9 |
| Total | 766 | 100.0 | 588 | 100.0 | 33 | 100.0 |
| Continuing Education Courses in Past 6 Months | | | | | | |
| 0 | 356 | 46.5 | 237 | 40.3 | 11 | 33.3 |
| 1 | 153 | 20.0 | 138 | 23.5 | 5 | 15.2 |
| 2 | 124 | 16.2 | 105 | 17.9 | 8 | 24.2 |
| 3 | 70 | 9.1 | 58 | 9.9 | 4 | 12.1 |
| 4 or more | 63 | 8.2 | 50 | 8.5 | 5 | 15.2 |
| Total | 766 | 100.0 | 588 | 100.0 | 33 | 100.0 |

Table 1 continued

| | All Respondents N | % | | Traditional N | % | Nontraditional N | % |
|---|---|---|---|---|---|---|---|
| Currently Employed | | | | | | | |
| Yes, Dental Hygiene | 580 | 75.7 | | 546 | 92.9 | 28 | 84.8 |
| Yes, Dental Hygiene and Other | 49 | 6.4 | 82.1 | 42 | 7.1 | 5 | 15.2 |
| Yes, Other | 49 | 6.4 | | NA | NA | NA | NA |
| No | 88 | 11.5 | | NA | NA | NA | NA |
| Total | 766 | 100.0 | | 588 | 100.0 | 33 | 100.0 |
| Region | | | | | | | |
| East | 152 | 22.8 | | 131 | 22.6 | 11 | 34.4 |
| South | 165 | 24.7 | | 139 | 24.0 | 8 | 25.0 |
| Midwest | 162 | 24.3 | | 143 | 24.7 | 7 | 21.9 |
| West | 188 | 28.2 | | 166 | 28.7 | 6 | 18.8 |
| Total | 667 | 100.0% | | 579 | 100.0 | 32 | 100.0 |
| Degree | | | | | | | |
| Baccalaureate | 243 | 31.7 | | 179 | 30.4 | 13 | 39.4 |
| Associate | 482 | 62.9 | | 378 | 64.3 | 17 | 51.5 |
| Both | 41 | 5.4 | | 31 | 5.3 | 3 | 9.1 |
| Total | 766 | 100.0 | | 588 | 100.0 | 33 | 100.0 |

Table 2 Summary Statistics on Personnel at Dental Work Settings of Traditional and Nontraditional Dental Hygienists - 1986

| Number of | Traditional | | | | | Nontraditional | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | No. | Range | Mean | Std. Dev. | Median | No. | Range | Mean | Std. Dev. | Median |
| Dentists | 447 | 1-6 | 1.4 | 0.8 | 1.0 | 22 | 1-80 | 7.6 | 17.6 | 2.0 |
| Dental Hygienists | 442 | 1-8 | 1.5 | 0.8 | 1.0 | 23 | 1-4 | 1.8 | 1.2 | 1.0 |
| Assistants - Provide Care | 449 | 0-12 | 0.9 | 1.2 | 1.0 | 23 | 0-10 | 1.4 | 2.6 | 0.0 |
| If employ this personnel | 233 | 1-12 | 1.7 | 1.2 | 1.0 | 10 | 1-10 | 3.6 | 3.2 | 2.0 |
| Assistants - Assist | 448 | 0-15 | 1.1 | 1.6 | 1.0 | 24 | 0-80 | 6.2 | 17.0 | 1.0 |
| If employ this personnel | 270 | 1-15 | 1.8 | 1.7 | 1.0 | 17 | 1-80 | 9.3 | 20.4 | 2.0 |
| Receptionists | 455 | 0-61 | 1.5 | 2.9 | 1.0 | 24 | 0-20 | 2.1 | 4.2 | 1.0 |
| If employ this personnel | 424 | 1-61 | 1.6 | 3.0 | 1.0 | 18 | 1-20 | 3.0 | 4.7 | 1.0 |
| Other 1* | | | | | | | | | | |
| If employ this personnel | 132 | 1-4 | 1.1 | 0.6 | 1.0 | 9 | 1-4 | 1.8 | 1.1 | 1.0 |
| Other 2* | | | | | | | | | | |
| If employ this personnel | 49 | 1-6 | 1.6 | 1.1 | 1.0 | 5 | 1-3 | 1.5 | 1.0 | 1.0 |
| Total Personnel | 457 | 1-83 | 6.6 | 5.6 | 5.0 | 25 | 1-196 | 18.4 | 39.9 | 6.0 |

* Other personnel listed were office manager (38), insurance personnel (35), business/financial personnel (26), laboratory technician (19), front office helpers (10), file clerk (8), computer personnel (6), public relations personnel (6), students observors/workers (6), x-ray technicians (3), sterilization personnel (3), hygiene assistant (2), nurse (1), speech therapist (1), recall person (1), and handyman (1).

Table 3 Number and Percent of Tradition and Nontraditional Dental Hygienists Who said Yes They Had Assistance with Care by Type of Assistance - 1986

| Type of Assistance | Traditional | | Nontraditional | |
|---|---|---|---|---|
| | No. | % | No. | % |
| Greet patient | 240 | 52.6 | 8 | 29.6 |
| Bring patient to operatory | 51 | 11.2 | 5 | 18.5 |
| Seat patient | 45 | 9.8 | 4 | 14.8 |
| Assist while provide service | 43 | 9.4 | 4 | 14.8 |
| Expose and/or process x-rays | 89 | 19.5 | 12 | 44.4 |
| Dismiss patient | 56 | 12.3 | 4 | 14.8 |
| Bill patient | 409 | 89.5 | 16 | 59.3 |
| Schedule patient | 380 | 83.2 | 18 | 66.7 |
| Other | 39 | 8.5 | 4 | 14.8 |

Table 4 Dentist Role in Dental Hygiene Care - 1986

| Type of Assistance | Traditional No. | Traditional % | Nontraditional No. | Nontraditional % |
|---|---|---|---|---|
| Examine Patient | | | | |
| Every patient | 271 | 59.7 | 11 | 42.3 |
| Most patients | 108 | 23.8 | 3 | 11.5 |
| Some patients | 57 | 12.6 | 4 | 15.4 |
| In office, not examine | 10 | 2.2 | 6 | 23.1 |
| Not in office | 8 | 1.8 | 2 | 7.7 |
| Total | 454 | 100.1 | 26 | 100.0 |
| Evaluate Your Work | | | | |
| Every patient | 219 | 48.6 | 7 | 25.9 |
| Most patients | 76 | 16.9 | 1 | 3.7 |
| Some patients | 65 | 14.4 | 5 | 18.5 |
| In office, not evaluate | 80 | 17.7 | 12 | 44.4 |
| Not in office | 11 | 2.4 | 2 | 7.4 |
| Total | 451 | 100.0 | 27 | 99.9 |

Table 5 Summary Statistics on Work Hours for Traditional and Nontraditional Dental Hygienists at the Setting They Work the Most Time - 1986

| | Traditional | | | | Nontraditional | | | |
|---|---|---|---|---|---|---|---|---|
| | Range | Mean | Std. Dev. | Median | Range | Mean | Std. Dev. | Median |
| Weeks per year | 9-52 | 49.3 | 3.7 | 50.0 | 32-52 | 48.3 | 4.9 | 50.0 |
| Days per week | 0.5-6 | 3.5 | 1.1 | 4.0 | 1-5 | 4.2 | 1.0 | 4.8 |
| Hours per day | 4-11 | 8.0 | 0.9 | 8.0 | 7-10 | 8.1 | 0.6 | 8.0 |
| Hours worked last day | 3.0-11.0 | 7.6 | 1.5 | 8.0 | 7.5-10.0 | 8.2 | 0.5 | 8.0 |

Table 6 Summary Statistics of Number of Patients Seen on Last Day Worked for Traditional and Nontraditional Dental Hygienists

| | Child Patients | | | | Adult Patients | | | | All Patients | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Range | Mean | Std. Dev. | Median | Range | Mean | Std. Dev. | Median | Range | Mean | Std. Dev. | Median |
| Traditional | 0-60 | 2.4 | 4.2 | 2.0 | 0-15 | 6.4 | 2.6 | 6.0 | 1-60 | 8.7 | 4.0 | 8.0 |
| Nontraditional | 0-14 | 2.3 | 3.5 | 1.0 | 0-17 | 5.1 | 3.9 | 6.0 | 2-19 | 7.3 | 4.1 | 8.0 |

75

76

Table 7 Frequency Distribution of Percent of Day Spent on General Work Areas by Clinical Dental Hygienists - 1985

| | 0% | 1%-10% | 11%-20% | 21%-30% | 31%-40% | 41%-50% | 51%-60% | 61%-70% | 71%-80% | 81%-90% | 91%-100% |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Prophylaxis and Chairside Educ. | | | | | | | | | | | |
| Traditional | - | 0.1 | 0.4 | 0.4 | 2.7 | 4.1 | 6.1 | 12.6 | 31.1 | 30.3 | 11.5 |
| Nontraditional | - | - | 3.0 | 9.0 | 3.0 | - | - | 9.1 | 27.3 | 30.3 | 18.2 |
| All Hygienists | - | 0.1 | 0.5 | 0.8 | 2.8 | 3.9 | 5.8 | 12.5 | 31.0 | 30.6 | 11.9 |
| Exposing and Processing Radiographs | | | | | | | | | | | |
| Traditional | 5.8 | 61.8 | 23.3 | 6.7 | 1.8 | 0.7 | 0.1 | - | - | - | - |
| Nontraditional | 21.2 | 63.6 | 6.0 | 9.1 | - | - | - | - | - | - | - |
| All Hygienists | 6.6 | 52.2 | 22.6 | 5.9 | 1.8 | 0.7 | - | 0.1 | - | - | - |
| Office Management | | | | | | | | | | | |
| Traditional | 27.8 | 61.3 | 7.8 | 2.1 | 0.4 | 0.1 | 0.1 | - | - | - | - |
| Nontraditional | 30.3 | 57.6 | 6.0 | 3.0 | - | - | 3.0 | - | - | - | - |
| All Hygienists | 27.9 | 61.2 | 7.8 | 2.2 | 0.4 | 0.1 | 0.1 | - | - | - | - |
| Dental Assisting | | | | | | | | | | | |
| Traditional | 75.4 | 22.6 | 1.4 | 0.4 | 0.6 | - | - | 0.3 | - | - | - |
| Nontraditional | 60.6 | 33.2 | - | - | 3.0 | 3.0 | - | - | - | - | - |
| All Hygienists | 74.7 | 22.1 | 2.1 | 1.5 | 0.1 | 0.1 | - | - | - | - | - |
| Formal Plaque Control | | | | | | | | | | | |
| Traditional | 86.4 | 9.3 | 2.2 | 1.4 | 0.1 | 0.1 | - | - | - | - | - |
| Nontraditional | 75.8 | 21.1 | - | 3.0 | - | - | - | - | - | - | - |
| All Hygienists | 85.9 | 10.0 | 2.1 | 1.5 | 0.1 | 0.1 | - | - | - | - | - |
| Restorative Procedures | | | | | | | | | | | |
| Traditional | 87.2 | 11.4 | 0.8 | 0.3 | - | - | - | - | - | - | - |
| Nontraditional | 84.8 | 15.1 | - | - | - | - | - | - | - | - | - |
| All Hygienists | 87.1 | 11.8 | 0.8 | 0.2 | - | - | - | - | - | - | - |
| Laboratory Work | | | | | | | | | | | |
| Traditional | 85.5 | 14.1 | 0.1 | - | - | 0.1 | - | - | - | - | - |
| Nontraditional | 81.8 | 18.2 | - | - | - | - | - | - | - | - | - |
| All Hygienists | 85.3 | 12.4 | 2.0 | - | - | 0.1 | - | - | - | - | - |

Table 8 Average Percent of Day Spent In General Work Areas by All Clinical Dental Hygienists - 1985

| Work Areas | Mean (%) | Standard Deviation (%) | Mode (%) | Median (%) |
|---|---|---|---|---|
| Prophylaxis and Chairside Education | | | | |
| Traditional (690) | 77.8 | 14.7 | 80.0 | 80.0 |
| Nontraditional (33) | 75.8 | 22.1 | 90.0 | 80.0 |
| All Hygienists | 77.8 | 15.1 | 80.0 | 80.0 |
| Exposing and Processing Radiographs | | | | |
| Traditional | 11.4 | 8.8 | 10.0 | 10.0 |
| Nontraditional | 7.8 | 7.7 | 10.0 | 8.0 |
| All Hygienists | 11.2 | 8.8 | 10.0 | 10.0 |
| Office Management | | | | |
| Traditional | 6.0 | 6.9 | 0.0 | 5.0 |
| Nontraditional | 7.6 | 11.5 | 0.0 | 5.0 |
| All Hygienists | 6.1 | 7.2 | 0.0 | 5.0 |
| Assisting | | | | |
| Traditional | 1.7 | 6.0 | 0.0 | 0.0 |
| Nontraditional | 3.9 | 10.9 | 0.0 | 0.0 |
| All Hygienists | 1.8 | 6.3 | 0.0 | 0.0 |
| Formal Plaque Control | | | | |
| Traditional | 1.6 | 5.3 | 0.0 | 0.0 |
| Nontraditional | 2.3 | 5.8 | 0.0 | 0.0 |
| All Hygienists | 1.6 | 5.3 | 0.0 | 0.0 |
| Restorative Procedures | | | | |
| Traditional | 0.7 | 2.8 | 0.0 | 0.0 |
| Nontraditional | 0.7 | 2.2 | 0.0 | 0.0 |
| All Hygienists | 0.7 | 2.8 | 0.0 | 0.0 |
| Laboratory Work | | | | |
| Traditional | 0.7 | 2.7 | 0.0 | 0.0 |
| Nontraditional | 0.7 | 1.7 | 0.0 | 0.0 |
| All Hygienists | 0.7 | 2.8 | 0.0 | 0.0 |

Table 9 Average Percent of Day Spent In General Work Areas by Dental Hygienists Who Did that Area of Work - 1985

| Work Areas | Mean (%) | Standard Deviation (%) | Mode (%) | Median (%) |
|---|---|---|---|---|
| Exposing and Processing Radiographs | | | | |
| Traditional | 12.1 | 8.6 | 10.0 | 10.0 |
| Nontraditional | 10.1 | 7.4 | 10.0 | 10.0 |
| All Hygienists | 12.0 | 8.6 | 10.0 | 10.0 |
| Office Management | | | | |
| Traditional | 8.3 | 6.9 | 5.0 | 5.0 |
| Nontraditional | 10.9 | 12.4 | 10.0 | 10.0 |
| All Hygienists | 8.4 | 7.2 | 5.0 | 5.0 |
| Assisting | | | | |
| Traditional | 7.1 | 10.5 | 5.0 | 5.0 |
| Nontraditional | 9.9 | 15.9 | 1.0 | 5.0 |
| All Hygienists | 7.3 | 10.9 | 5.0 | 5.0 |
| Laboratory Work | | | | |
| Traditional | 4.6 | 5.8 | 5.0 | 5.0 |
| Nontraditional | 4.0 | 1.6 | 5.0 | 5.0 |
| All Hygienists | 4.5 | 5.6 | 5.0 | 4.0 |
| Formal Plaque Control | | | | |
| Traditional | 11.8 | 9.4 | 10.0 | 10.0 |
| Nontraditional | 9.6 | 8.7 | 10.0 | 10.0 |
| All Hygienists | 11.7 | 9.3 | 10.0 | 10.0 |
| Restorative Procedures | | | | |
| Traditional | 5.5 | 6.0 | 5.0 | 5.0 |
| Nontraditional | 4.6 | 4.1 | 2.0 | 2.0 |
| All Hygienists | 5.5 | 5.9 | 5.0 | 5.0 |

Table 10 Relative Frequency that Traditional Dental Hygienists Performed Thirteen Services for Adult Recall Patients - 1985

| Service | Relative Frequency | | | | |
|---|---|---|---|---|---|
| | Almost All the Time | Most of the Time | Sometimes | Seldom | Never |
| Radiographs | 53.5% | 26.7% | 13.4% | 3.9% | 2.6% |
| Root Plane | 34.0 | 29.2 | 28.2 | 5.7 | 2.9 |
| Topical Fluoride | 29.8 | 8.9 | 22.6 | 26.8 | 11.9 |
| Curettage | 13.3 | 11.2 | 27.5 | 17.5 | 30.5 |
| Remove Overhangs | 5.3 | 9.8 | 35.5 | 22.3 | 27.1 |
| Sealants | 6.6 | 4.4 | 12.5 | 15.9 | 60.6 |
| Nutritional Couseling | 5.7 | 5.1 | 28.1 | 34.3 | 26.6 |
| Polish Restorations | 4.1 | 5.3 | 20.2 | 29.2 | 41.4 |
| Local Anesthesia | 2.9 | 6.3 | 15.2 | 6.2 | 69.4 |
| Nitrous Oxide | 2.6 | 4.2 | 25.1 | 18.0 | 50.1 |
| Chemical Curettage | 1.2 | 0.8 | 3.8 | 4.5 | 89.7 |
| Gingivectomies | 0.2 | 0.6 | 2.4 | 5.4 | 91.4 |
| Place Restorations | 0.2 | - | 4.5 | 10.3 | 85.2 |

Table 11 Relative Frequency that Nontraditional Dental Hygienists Performed Thirteen Services for Adult Recall Patients - 1985

| Service | Relative Frequency | | | | |
|---|---|---|---|---|---|
| | Almost All the Time | Most of the Time | Sometimes | Seldom | Never |
| Radiographs | 33.3% | 18.2% | 15.2% | 24.2% | 9.1% |
| Root Plane | 12.1 | 24.2 | 54.5 | 9.1 | - |
| Topical Fluoride | 21.2 | 9.1 | 24.2 | 33.3 | 12.1 |
| Curettage | 3.0 | 9.1 | 45.5 | 21.2 | 21.2 |
| Remove Overhangs | 3.0 | 3.0 | 45.5 | 27.3 | 21.2 |
| Nutritional Counseling | 3.0 | 3.0 | 30.3 | 30.3 | 33.3 |
| Sealants | 3.0 | 3.0 | 9.1 | 24.2 | 60.6 |
| Polish Restorations | - | 3.0 | 26.4 | 27.3 | 33.3 |
| Local Anesthesia | - | 3.0 | 18.2 | 3.0 | 75.8 |
| Nitrous Oxide | - | 3.9 | 6.1 | 12.1 | 78.8 |
| Place Restorations | - | - | 3.0 | 15.2 | 81.8 |
| Gingivectomies | - | - | 3.0 | 9.1 | 87.9 |
| Chemical Curettage | - | - | 3.0 | 6.1 | 90.9 |

Table 12 Relative Frequency that Traditional Dental Hygienists Performed Nine Services for Child Recall Patients - 1985

| Service | Relative Frequency | | | | |
|---|---|---|---|---|---|
| | Almost All the Time | Most of the Time | Sometimes | Seldom | Never |
| Topical Fluoride | 81.6% | 8.9% | 3.7% | 2.3% | 3.6% |
| Patient Education | 69.8 | 24.9 | 4.5 | 0.8 | - |
| Radiographs | 50.6 | 25.6 | 14.9 | 6.0 | 2.9 |
| Sealants | 17.2 | 16.0 | 17.6 | 7.1 | 42.1 |
| Nutritional Counseling | 9.6 | 19.5 | 31.8 | 18.7 | 20.5 |
| Nitrous Oxide | 1.3 | 1.1 | 8.1 | 12.8 | 76.7 |
| Local Anesthesia | 1.3 | 1.3 | 5.0 | 7.1 | 85.3 |
| Polish Restorations | - | - | 29.6 | 22.2 | 48.1 |
| Place Restorations | 0.3 | 0.2 | 3.6 | 7.4 | 88.5 |

Table 13 Relative Frequency that Nontraditional Dental Hygienists Performed Nine Services for Child Recall Patients - 1985

| Service | Relative Frequency | | | | |
|---|---|---|---|---|---|
| | Almost All the Time | Most of the Time | Sometimes | Seldom | Never |
| Topical Fluoride | 81.5% | 14.8% | 3.7% | - | - |
| Patient Education | 66.7 | 25.9 | 7.4 | - | - |
| Radiographs | 29.6 | 29.6 | 22.2 | 11.1% | 7.4% |
| Nutritional Counseling | 18.5 | 11.1 | 37.0 | 11.1 | 22.2 |
| Sealants | 11.1 | 25.9 | 14.8 | 11.1 | 37.0 |
| Polish Restorations | - | - | 29.6 | 22.2 | 48.1 |
| Nitrous Oxide | - | - | 7.4 | 7.4 | 85.2 |
| Local Anesthesia | - | - | 3.7 | 3.7 | 92.6 |
| Place Restorations | - | - | - | 11.8 | 88.9 |

Table 14 Amount of Time Scheduled for Adult Recall Patients - 1985

| Time | Traditional Clinical Hygienists | | Nontraditional Clinical Hygienists | | All Clinical Dental Hygienists | |
|---|---|---|---|---|---|---|
| | No. | % | No. | % | No. | % |
| 30 minutes | 63 | 9.5 | 5 | 15.2 | 68 | 9.8 |
| 45 minutes | 395 | 59.5 | 20 | 60.6 | 415 | 59.5 |
| 60 minutes | 205 | 30.9 | 8 | 24.2 | 213 | 30.6 |
| 75 minutes | 1 | 0.1 | - | - | 1 | 0.1 |
| Total | 664 | 100.0 | 33 | 100.0 | 697 | 100.0 |
| Not See Adult Patients | 8 | | 1 | | 9 | |

Table 15 Amount of Time Scheduled for Child Recall Patients - 1985

| Time | Traditional Clinical Hygienists | | Nontraditional Clinical Hygienists | | All Clinical Dental Hygienists | |
|---|---|---|---|---|---|---|
| | No. | % | No. | % | No. | % |
| 15 minutes | 28 | 4.5 | - | - | 28 | 4.3 |
| 30 minutes | 505 | 81.7 | 19 | 70.4 | 524 | 81.2 |
| 45 minutes | 85 | 13.8 | 8 | 29.6 | 93 | 13.2 |
| Total | 618 | 100.0 | 27 | 100.0 | 645 | 99.9 |
| Not See Child Patients | 55 | | 7 | | 62 | |

Table 16 Amount of Time Spent on Health History and Examination of Average Adult Recall Patient - 1985

| Time | Traditional Clinical Hygienists | | Nontraditional Clinical Hygienists | | All Clinical Dental Hygienists | |
|---|---|---|---|---|---|---|
| | No. | % | No. | % | No. | % |
| 1-5 minutes | 507 | 76.1 | 26 | 78.8 | 533 | 76.3 |
| 6-10 minutes | 107 | 16.1 | 4 | 12.1 | 111 | 15.9 |
| 11-15 minutes | 12 | 1.8 | - | - | 12 | 1.7 |
| 16 min. or more | 2 | 0.3 | - | - | 2 | 0.3 |
| Not done by dental hygenist | 38 | 5.7 | 3 | 9.1 | 41 | 5.9 |
| Total | 666 | 100.0 | 33 | 100.0 | 699 | 100.1 |

Table 17 Amount of Time Spent to Scale, Root Plane, and Polish Teeth of Average Adult Recall Patient - 1985

| Time | Traditional Clinical Hygienists | | Nontraditional Clinical Hygienists | | All Clinical Dental Hygienists | |
|---|---|---|---|---|---|---|
| | No. | % | No. | % | No. | % |
| 14 min. or less | 4 | 0.6 | - | - | 4 | 0.6 |
| 15-20 minutes | 59 | 9.0 | 2 | 6.0 | 61 | 8.8 |
| 21-30 minutes | 314 | 47.8 | 15 | 45.5 | 329 | 47.7 |
| 31-45 minutes | 258 | 39.3 | 15 | 45.5 | 273 | 39.6 |
| 46 min. or more | 22 | 3.3 | 1 | 3.0 | 23 | 3.3 |
| Total | 657 | 100.0 | 33 | 100.0 | 690 | 100.0 |

Table 18 Amount of Time Spent on Patient Education with Average Adult Recall Patient - 1985

| Time | Traditional Clinical Hygienists | | Nontraditional Clinical Hygienists | | All Clinical Dental Hygienists | |
|---|---|---|---|---|---|---|
| | No. | % | No. | % | No. | % |
| 5 min. or less | 388 | 59.4 | 14 | 42.4 | 402 | 58.6 |
| 6-10 minutes | 224 | 34.3 | 18 | 54.5 | 242 | 35.2 |
| 11-15 minutes | 35 | 5.4 | 1 | 3.0 | 36 | 5.2 |
| 16-20 minutes | 4 | 0.6 | - | - | 4 | 0.6 |
| Not done by dental hygienist | 2 | 0.3 | - | - | 2 | 0.3 |
| Total | 653 | 100.0 | 33 | 99.9 | 686 | 99.9 |

Table 19 Amount of Time Spent on Health History and Examination of Average Child Recall Patient - 1985

| Time | Traditional Clinical Hygienists | | Nontraditional Clinical Hygienists | | All Clinical Dental Hygienists | |
|---|---|---|---|---|---|---|
| | No. | % | No. | % | No. | % |
| 1-5 minutes | 539 | 87.2 | 19 | 73.1 | 558 | 86.6 |
| 6-10 minutes | 50 | 8.1 | 4 | 15.4 | 54 | 8.4 |
| 11-15 minutes | 5 | 0.8 | 2 | 7.7 | 7 | 1.1 |
| 16 min. or more | 1 | 0.2 | - | - | 1 | 0.2 |
| Not done by dental hygienist | 23 | 3.7 | 1 | 3.8 | 24 | 3.7 |
| Total | 618 | 100.0 | 26 | 100.0 | 644 | 100.0 |

Table 20 Amount of Time Spent to Scale and Polish Average Child Recall Patient - 1985

| Time | Traditional Clinical Hygienists | | Nontraditional Clinical Hygienists | | All Clinical Dental Hygienists | |
|---|---|---|---|---|---|---|
| | No. | % | No. | % | No. | % |
| 14 min. or less | 193 | 31.2 | 5 | 19.2 | 198 | 30.7 |
| 15-20 minutes | 387 | 62.6 | 18 | 69.2 | 405 | 62.9 |
| 21-30 minutes | 29 | 4.7 | 2 | 7.7 | 31 | 4.8 |
| 31-45 minutes | 6 | 1.0 | 1 | 3.8 | 7 | 1.1 |
| Not done by dental hygienist | 3 | 0.5 | - | - | 3 | 0.5 |
| Total | 618 | 100.0 | 26 | 99.9 | 644 | 100.0 |

Table 21 Amount of Time Spent on Radiographs for Average Child Recall Patient - 1985

| Time | Traditional Clinical Hygienists | | Nontraditional Clinical Hygienists | | All Clinical Dental Hygienists | |
|---|---|---|---|---|---|---|
| | No. | % | No. | % | No. | % |
| 1-5 minutes | 483 | 78.2 | 16 | 61.5 | 499 | 77.5 |
| 6-10 minutes | 83 | 13.4 | 4 | 15.4 | 87 | 13.5 |
| 11 min. or more | 2 | 0.3 | - | - | 2 | 0.3 |
| Not done by dental hygienist | 50 | 8.1 | 6 | 23.1 | 56 | 8.7 |
| Total | 618 | 100.0 | 26 | 100.0 | 644 | 100.0 |

Table 22 Amount of Time Spent on Topical Fluoride Application for Average Child Recall Patient - 1985

| Time | Traditional Clinical Hygienists | | Nontraditional Clinical Hygienists | | All Clinical Dental Hygienists | |
|---|---|---|---|---|---|---|
| | No. | % | No. | % | No. | % |
| 1-5 minutes | 526 | 85.1 | 21 | 80.8 | 547 | 84.9 |
| 6-10 minutes | 52 | 8.4 | 4 | 15.4 | 56 | 8.7 |
| Not done by dental hygienist | 40 | 6.5 | 1 | 3.8 | 41 | 6.4 |
| Total | 618 | 100.0 | 26 | 100.0 | 644 | 100.0 |

TABLE 23 FREQUENCY THAT TRADITIONAL AND NONTRADITIONAL DENTAL HYGIENISTS PROVIDE EXAMINATION SERVICES FOR CHILD PATIENTS - 1986

| | Almost all the Time | | | | Most of the Time | | | | Sometimes | | | | Seldom | | | | Never | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Trad. | | N/Trad. | | Trad. | | N/Trad. | | Trad. | | N/Trad. | | Trad. | | N/Trad. | | Trad. | | N/Trad. | |
| | No. | % | No. | % | No. | % | No. | % | No. | % | No. | % | No. | % | No. | % | No. | % | No. | % |
| All Patients | | | | | | | | | | | | | | | | | | | | |
| Emergency Examination | 25 | 5.8 | 3 | 13.0 | 12 | 2.8 | -- | -- | 103 | 24.1 | 5 | 21.7 | 66 | 15.4 | 3 | 13.0 | 222 | 51.9 | 12 | 52.2 |
| Blood pressure | 4 | 0.9 | -- | -- | -- | -- | -- | -- | 9 | 2.1 | 1 | 4.3 | 33 | 7.7 | 5 | 21.7 | 385 | 89.3 | 17 | 73.9 |
| Pulse | 2 | 0.5 | -- | -- | -- | -- | -- | -- | 4 | 0.9 | -- | -- | 26 | 6.1 | 5 | 21.7 | 396 | 92.5 | 18 | 78.3 |
| Initial Patient Visit | | | | | | | | | | | | | | | | | | | | |
| Gingiva-visual | 345 | 80.0 | 14 | 60.9 | 28 | 6.5 | 5 | 21.7 | 14 | 3.2 | 1 | 4.3 | 9 | 2.1 | -- | -- | 35 | 8.1 | 3 | 13.0 |
| Medical history | 324 | 74.8 | 14 | 60.9 | 16 | 3.7 | 4 | 17.4 | 31 | 7.2 | 1 | 4.3 | 15 | 3.5 | 2 | 8.7 | 47 | 10.9 | 2 | 8.7 |
| Caries | 303 | 70.3 | 12 | 54.5 | 24 | 5.6 | 2 | 9.1 | 27 | 6.3 | 2 | 9.1 | 15 | 3.5 | 2 | 9.1 | 62 | 14.4 | 4 | 18.2 |
| Intraoral (IO) soft tissue-visual | 282 | 65.4 | 11 | 47.8 | 40 | 9.3 | 6 | 26.1 | 25 | 5.8 | 3 | 13.0 | 25 | 5.8 | -- | -- | 59 | 13.7 | 3 | 13.0 |
| Bleeding points | 209 | 48.9 | 9 | 40.9 | 36 | 8.4 | 3 | 13.6 | 26 | 6.1 | 3 | 13.6 | 48 | 11.2 | 2 | 9.1 | 108 | 25.3 | 5 | 22.7 |
| Extraoral-visual | 193 | 44.9 | 11 | 47.8 | 58 | 13.5 | 4 | 17.4 | 54 | 12.6 | 2 | 8.7 | 34 | 7.9 | 1 | 4.3 | 91 | 21.2 | 5 | 21.7 |
| (IO) Soft tissue palpitation | 140 | 32.5 | 3 | 13.0 | 32 | 7.4 | 3 | 13.0 | 64 | 14.8 | 8 | 34.8 | 63 | 14.6 | 3 | 13.0 | 132 | 30.6 | 6 | 26.1 |
| Occlusal dys-function | 107 | 24.9 | 7 | 30.4 | 46 | 10.7 | 1 | 4.3 | 51 | 11.9 | 3 | 13.0 | 48 | 11.2 | 5 | 21.7 | 178 | 41.4 | 7 | 30.4 |
| Head and neck palpitation | 56 | 13.0 | 5 | 21.7 | 21 | 4.9 | 2 | 8.7 | 53 | 12.3 | 4 | 17.4 | 77 | 17.9 | 6 | 26.1 | 223 | 51.9 | 6 | 26.1 |
| Probe-diseased areas | 42 | 9.9 | 1 | 4.3 | 8 | 1.9 | 3 | 13.0 | 33 | 7.7 | 3 | 13.0 | 42 | 9.9 | 3 | 13.0 | 301 | 70.7 | 13 | 56.5 |
| Probe pre-selected teeth | 24 | 5.6 | 1 | 4.3 | 4 | 0.9 | -- | -- | 32 | 7.5 | 5 | 21.7 | 54 | 12.7 | 5 | 21.7 | 311 | 73.2 | 12 | 52.2 |
| Probe-all teeth | 20 | 4.7 | 1 | 4.3 | 8 | 1.9 | 1 | 4.3 | 30 | 7.1 | 4 | 17.4 | 77 | 18.2 | 3 | 13.0 | 289 | 68.2 | 14 | 60.9 |

TABLE 23 (Continued)

| | Almost all the Time | | | | Most of the Time | | | | Sometimes | | | | Seldom | | | | Never | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Trad. | | N/Trad. | | Trad. | | N/Trad. | | Trad. | | N/Trad. | | Trad. | | N/Trad. | | Trad. | | N/Trad. | |
| | No. | % | No. | % | No. | % | No. | % | No. | % | No. | % | No. | % | No. | % | No. | % | No. | % |
| Recall Patient Visit | | | | | | | | | | | | | | | | | | | | |
| Gingiva-visual | 367 | 85.0 | 18 | 78.3 | 35 | 8.1 | 4 | 17.4 | 11 | 2.5 | -- | -- | 4 | 0.9 | -- | -- | 15 | 3.5 | 1 | 4.3 |
| Caries | 334 | 77.5 | 17 | 73.9 | 31 | 7.2 | 1 | 4.3 | 23 | 5.3 | 1 | 4.3 | 8 | 1.9 | 3 | 13.0 | 35 | 8.1 | 1 | 4.3 |
| (IO) Soft tissue-visual | 287 | 66.4 | 14 | 60.9 | 45 | 10.4 | 6 | 26.1 | 41 | 9.5 | 2 | 8.7 | 21 | 4.9 | -- | -- | 38 | 8.8 | 1 | 4.3 |
| Medical history | 279 | 64.4 | 15 | 65.2 | 53 | 12.2 | 5 | 21.7 | 46 | 10.6 | 2 | 8.7 | 29 | 6.7 | -- | -- | 26 | 6.0 | 1 | 4.3 |
| Bleeding points | 219 | 51.3 | 12 | 54.5 | 44 | 10.3 | 2 | 9.1 | 31 | 7.3 | 2 | 9.1 | 46 | 10.8 | 3 | 13.6 | 87 | 20.4 | 3 | 13.6 |
| Extraoral-visual | 205 | 47.6 | 10 | 43.5 | 68 | 15.8 | 6 | 26.1 | 59 | 13.7 | 3 | 13.0 | 29 | 6.7 | 1 | 4.3 | 70 | 16.2 | 3 | 13.0 |
| (IO) Soft tissue-palpitation | 138 | 32.1 | 5 | 21.7 | 45 | 10.5 | 3 | 13.0 | 74 | 17.2 | 7 | 30.4 | 59 | 13.7 | 3 | 13.0 | 114 | 26.5 | 5 | 21.7 |
| Occlusal dys-function | 94 | 21.9 | 7 | 30.4 | 46 | 10.7 | -- | -- | 71 | 16.6 | 4 | 17.4 | 55 | 12.8 | 7 | 30.4 | 163 | 38.0 | 5 | 21.7 |
| Head and neck palpitation | 51 | 11.9 | 4 | 17.4 | 20 | 4.7 | 2 | 8.7 | 57 | 13.3 | 6 | 26.1 | 92 | 21.4 | 5 | 21.7 | 209 | 48.7 | 6 | 26.1 |
| Probe-diseased areas | 47 | 11.1 | 2 | 8.7 | 12 | 2.8 | 3 | 13.0 | 36 | 8.5 | 3 | 13.0 | 42 | 9.9 | 4 | 17.4 | 287 | 67.7 | 11 | 47.8 |
| Probe pre-selected teeth | 25 | 5.9 | 1 | 4.5 | 9 | 2.1 | -- | -- | 39 | 9.2 | 4 | 18.2 | 61 | 14.3 | 6 | 27.3 | 292 | 68.5 | 11 | 50.0 |
| Probe-all teeth | 20 | 4.7 | 1 | 4.3 | 7 | 1.7 | 1 | 4.3 | 30 | 7.1 | 3 | 13.0 | 84 | 19.9 | 5 | 21.7 | 282 | 66.7 | 13 | 56.5 |

TABLE 24 FREQUENCY THAT TRADITIONAL AND NONTRADITIONAL DENTAL HYGIENISTS PROVIDE EXAMINATION SERVICES FOR ADULT PATIENTS - 1986

| | Almost all the Time | | | | Most of the Time | | | | Sometimes | | | | Seldom | | | | Never | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Trad. | | N/Trad. | | Trad. | | N/Trad. | | Trad. | | N/Trad. | | Trad. | | N/Trad. | | Trad. | | N/Trad. | |
| | No. | % | No. | % | No. | % | No. | % | No. | % | No. | % | No. | % | No. | % | No. | % | No. | % |
| All Patients | | | | | | | | | | | | | | | | | | | | |
| Blood pressure | 51 | 11.2 | 3 | 11.5 | 17 | 3.7 | 2 | 7.7 | 114 | 25.1 | 10 | 38.5 | 102 | 22.5 | 3 | 11.5 | 170 | 37.4 | 8 | 30.8 |
| Emergency exam | 27 | 6.0 | 4 | 15.4 | 15 | 3.3 | -- | -- | 112 | 24.9 | 7 | 26.9 | 68 | 15.1 | 3 | 11.5 | 228 | 50.7 | 12 | 46.2 |
| Pulse | 14 | 3.1 | -- | -- | 6 | 1.3 | 1 | 3.8 | 53 | 11.8 | 4 | 15.4 | 81 | 18.0 | 9 | 34.6 | 297 | 65.9 | 12 | 46.2 |
| Initial Patient Visit | | | | | | | | | | | | | | | | | | | | |
| Gingiva-visual | 365 | 80.4 | 15 | 57.7 | 25 | 5.5 | 6 | 23.1 | 14 | 3.1 | 2 | 7.7 | 10 | 2.2 | -- | -- | 40 | 8.8 | 3 | 11.5 |
| Medical history | 330 | 72.5 | 19 | 73.1 | 15 | 3.3 | 2 | 7.7 | 35 | 7.7 | 1 | 3.8 | 15 | 3.3 | 2 | 7.7 | 60 | 13.2 | 2 | 7.7 |
| (IO) Soft tissue-visual | 308 | 67.8 | 13 | 50.0 | 42 | 9.3 | 7 | 26.9 | 35 | 7.7 | 2 | 7.7 | 17 | 3.7 | -- | -- | 52 | 11.5 | 4 | 15.4 |
| Caries exam. | 298 | 65.6 | 11 | 42.3 | 30 | 6.6 | 4 | 15.4 | 33 | 7.3 | 4 | 15.4 | 19 | 4.2 | 3 | 11.5 | 74 | 16.3 | 4 | 15.4 |
| Bleeding points | 271 | 60.0 | 12 | 46.2 | 51 | 11.3 | 4 | 15.4 | 40 | 8.8 | 5 | 19.2 | 21 | 4.6 | 1 | 3.8 | 69 | 15.3 | 4 | 15.4 |
| Extraoral visual | 207 | 45.6 | 12 | 46.2 | 70 | 15.4 | 3 | 11.5 | 60 | 13.2 | 2 | 7.7 | 26 | 5.7 | 2 | 7.7 | 91 | 20.0 | 7 | 26.9 |
| (IO) Soft tissue-palpitation | 170 | 37.4 | 8 | 30.8 | 52 | 11.5 | 5 | 19.2 | 91 | 20.0 | 7 | 26.9 | 47 | 10.4 | 2 | 7.7 | 94 | 20.7 | 4 | 15.4 |
| Probe-all teeth | 156 | 34.8 | 6 | 24.0 | 52 | 11.5 | 3 | 12.0 | 103 | 22.8 | 8 | 32.0 | 50 | 11.1 | 2 | 8.0 | 91 | 20.1 | 6 | 24.0 |
| Occlusal exam | 106 | 23.5 | 7 | 26.9 | 43 | 9.5 | 1 | 3.8 | 61 | 13.5 | 5 | 19.2 | 58 | 12.8 | 7 | 26.9 | 184 | 40.7 | 6 | 23.1 |
| Probe-diseased areas | 105 | 23.3 | 3 | 12.0 | 48 | 10.6 | 5 | 20.0 | 80 | 17.7 | 3 | 12.0 | 50 | 11.1 | 4 | 16.0 | 168 | 37.3 | 10 | 40.0 |
| Probe-preselected teeth | 101 | 22.4 | 4 | 16.0 | 49 | 10.9 | -- | -- | 93 | 20.7 | 7 | 28.0 | 44 | 9.8 | 5 | 20.0 | 163 | 36.2 | 9 | 36.0 |
| Head and neck palpitation | 83 | 18.3 | 9 | 34.6 | 43 | 9.5 | 1 | 3.8 | 77 | 17.0 | 5 | 19.2 | 78 | 17.2 | 6 | 23.1 | 172 | 38.0 | 5 | 19.2 |

TABLE 24 (Continued)

| | Almost all the Time | | | | Most of the Time | | | | Sometimes | | | | Seldom | | | | Never | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Trad. | | N/Trad. | | Trad. | | N/Trad. | | Trad. | | N/Trad. | | Trad. | | N/Trad. | | Trad. | | N/Trad. | |
| | No. | % | No. | % | No. | % | No. | % | No. | % | No. | % | No. | % | No. | % | No. | % | No. | % |
| Recall Patient Visit | | | | | | | | | | | | | | | | | | | | |
| Gingival visual | 413 | 90.8 | 19 | 73.1 | 28 | 6.2 | 5 | 19.2 | 5 | 1.1 | 1 | 3.8 | 2 | 0.4 | -- | -- | 7 | 1.5 | 1 | 3.8 |
| Caries-exam. | 347 | 76.3 | 15 | 57.7 | 36 | 7.9 | 4 | 15.4 | 31 | 6.8 | 3 | 11.5 | 10 | 2.2 | 3 | 11.5 | 31 | 6.8 | 1 | 3.8 |
| (IO) Soft tissue visual | 335 | 73.6 | 15 | 57.7 | 51 | 11.2 | 8 | 30.8 | 43 | 9.5 | 1 | 3.8 | 10 | 2.2 | -- | -- | 16 | 3.5 | 2 | 7.7 |
| Medical history | 324 | 71.2 | 19 | 73.1 | 64 | 14.1 | 3 | 11.5 | 46 | 10.1 | 2 | 7.7 | 10 | 2.2 | -- | -- | 11 | 2.4 | 2 | 7.7 |
| Bleeding points | 299 | 66.0 | 16 | 61.5 | 61 | 13.5 | 3 | 11.5 | 42 | 9.3 | 3 | 11.5 | 17 | 3.8 | 1 | 3.8 | 34 | 7.5 | 3 | 11.5 |
| Extraoral visual | 229 | 50.4 | 11 | 42.3 | 78 | 17.2 | 5 | 19.2 | 66 | 14.5 | 3 | 11.5 | 23 | 5.1 | 2 | 7.7 | 58 | 12.8 | 5 | 19.2 |
| (IO) Soft tissue palpitation | 179 | 39.5 | 9 | 34.6 | 65 | 14.3 | 5 | 19.2 | 103 | 22.7 | 7 | 26.9 | 42 | 9.3 | 3 | 11.5 | 64 | 14.1 | 2 | 7.7 |
| Probe-diseased areas | 132 | 29.1 | 4 | 16.0 | 58 | 12.8 | 5 | 20.0 | 96 | 21.2 | 4 | 16.0 | 41 | 9.1 | 5 | 20.0 | 126 | 27.8 | 7 | 28.0 |
| Probe-all teeth | 121 | 26.8 | 5 | 20.0 | 64 | 14.2 | 3 | 12.0 | 154 | 34.1 | 8 | 32.0 | 51 | 11.3 | 3 | 12.0 | 62 | 13.7 | 6 | 24.0 |
| Probe-preselected teeth | 117 | 25.9 | 6 | 24.0 | 73 | 16.2 | -- | -- | 106 | 23.5 | 7 | 28.0 | 37 | 8.2 | 6 | 24.0 | 118 | 26.2 | 6 | 24.0 |
| Occlusal-exam | 85 | 18.8 | 6 | 23.1 | 47 | 10.4 | 1 | 3.8 | 89 | 19.7 | 6 | 23.1 | 70 | 15.5 | 8 | 30.8 | 160 | 35.5 | 5 | 19.2 |
| Head and neck palpitation | 74 | 16.3 | 8 | 30.8 | 41 | 9.1 | 2 | 7.7 | 98 | 21.6 | 7 | 26.9 | 98 | 21.6 | 5 | 19.2 | 142 | 31.3 | 4 | 15.4 |

TABLE 25 FREQUENCY THAT TRADITIONAL AND NONTRADITIONAL DENTAL HYGIENISTS CHART EXAMINATION FINDINGS FOR CHILD PATIENTS - 1986

| | Almost all the Time | | | | Most of the Time | | | | Sometimes | | | | Seldom | | | | Never | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Trad. | | N/Trad. | | Trad. | | N/Trad. | | Trad. | | N/Trad. | | Trad. | | N/Trad. | | Trad. | | N/Trad. | |
| | No. | % | No. | % | No. | % | No. | % | No. | % | No. | % | No. | % | No. | % | No. | % | No. | % |
| All Patients | | | | | | | | | | | | | | | | | | | | |
| Chart treatment provided | 374 | 87.2 | 22 | 95.7 | 18 | 4.2 | -- | -- | 10 | 2.3 | -- | -- | 5 | 1.2 | -- | -- | 22 | 5.1 | 1 | 4.3 |
| Initial Patient Visit | | | | | | | | | | | | | | | | | | | | |
| Carious lesions | 307 | 71.2 | 14 | 60.9 | 19 | 4.4 | 1 | 4.3 | 30 | 7.0 | 1 | 4.3 | 13 | 3.0 | 3 | 13.0 | 62 | 14.4 | 4 | 17.4 |
| Soft tissue findings | 246 | 57.2 | 13 | 56.5 | 46 | 10.7 | -- | -- | 42 | 9.8 | 3 | 13.0 | 28 | 6.5 | 4 | 17.4 | 68 | 15.8 | 3 | 13.0 |
| Gingival findings. | 244 | 56.7 | 12 | 52.2 | 45 | 10.5 | 1 | 4.3 | 39 | 9.1 | 5 | 21.7 | 32 | 7.4 | 2 | 8.7 | 70 | 16.3 | 3 | 13.0 |
| Anamolies | 240 | 55.8 | 15 | 65.2 | 37 | 8.6 | -- | -- | 45 | 10.5 | 1 | 4.3 | 30 | 7.0 | 2 | 8.7 | 78 | 18.1 | 5 | 21.7 |
| Occlusal findings | 202 | 47.1 | 9 | 39.1 | 42 | 9.8 | 1 | 4.3 | 43 | 10.0 | 3 | 13.0 | 33 | 7.7 | 4 | 17.4 | 109 | 25.4 | 6 | 26.1 |
| Existing restorations | 159 | 37.1 | 8 | 34.8 | 19 | 4.4 | 1 | 4.3 | 39 | 9.1 | 4 | 17.4 | 49 | 11.4 | 4 | 17.4 | 163 | 38.0 | 6 | 26.1 |
| Probe depths | 81 | 19.3 | 5 | 22.7 | 15 | 3.6 | -- | -- | 28 | 6.7 | 4 | 18.2 | 65 | 15.5 | 3 | 13.6 | 231 | 55.0 | 10 | 45.5 |
| Recall Patient Visit | | | | | | | | | | | | | | | | | | | | |
| Carious lesions | 340 | 78.7 | 17 | 73.9 | 24 | 5.6 | 3 | 13.0 | 23 | 5.3 | -- | -- | 10 | 2.3 | 1 | 4.3 | 35 | 8.1 | 2 | 8.7 |
| Soft tissue findings | 260 | 60.5 | 14 | 60.9 | 60 | 14.0 | 3 | 13.0 | 34 | 7.9 | 4 | 17.4 | 30 | 7.0 | 1 | 4.3 | 46 | 10.7 | 1 | 4.3 |
| Gingival findings | 254 | 59.3 | 13 | 56.5 | 55 | 12.9 | 4 | 17.4 | 39 | 9.1 | 4 | 17.4 | 30 | 7.0 | 1 | 4.3 | 50 | 11.7 | 1 | 4.3 |
| Anamolies | 212 | 49.3 | 13 | 56.5 | 46 | 10.7 | 2 | 8.7 | 55 | 12.8 | 3 | 13.0 | 43 | 10.0 | 2 | 8.7 | 74 | 17.2 | 3 | 13.0 |
| Occlusal findings | 196 | 45.6 | 8 | 36.4 | 47 | 10.9 | -- | -- | 50 | 11.6 | 5 | 22.7 | 39 | 9.1 | 4 | 18.2 | 98 | 22.8 | 5 | 22.7 |
| Probe depths | 81 | 19.4 | 5 | 22.7 | 21 | 5.0 | -- | -- | 29 | 7.0 | 6 | 27.3 | 68 | 16.3 | 2 | 9.1 | 218 | 52.3 | 9 | 40.9 |
| Existing restorations | 119 | 27.8 | 8 | 34.8 | 18 | 4.2 | 1 | 4.3 | 39 | 9.1 | 3 | 13.0 | 71 | 16.6 | 5 | 21.7 | 181 | 42.3 | 6 | 26.1 |

TABLE 26 FREQUENCY THAT TRADITIONAL AND NONTRADITIONAL DENTAL HYGIENISTS CHART EXAMINATION FINDINGS FOR ADULT PATIENTS - 1986

| | Almost all the Time | | | | Most of the Time | | | | Sometimes | | | | Seldom | | | | Never | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Trad. | | N/Trad. | | Trad. | | N/Trad. | | Trad. | | N/Trad. | | Trad. | | N/Trad. | | Trad. | | N/Trad. | |
| | No. | % | No. | % | No. | % | No. | % | No. | % | No. | % | No. | % | No. | % | No. | % | No. | % |
| All Patients | | | | | | | | | | | | | | | | | | | | |
| Chart treatment provided | 402 | 88.9 | 24 | 92.3 | 19 | 4.2 | -- | -- | 9 | 2.0 | -- | -- | 40 | 0.9 | -- | -- | 18 | 4.0 | 2 | 7.7 |
| Initial Patient Visit | | | | | | | | | | | | | | | | | | | | |
| Carious lesions | 310 | 68.4 | 15 | 57.7 | 24 | 5.3 | 3 | 11.5 | 34 | 7.5 | 2 | 7.7 | 16 | 3.5 | 3 | 11.5 | 69 | 15.2 | 3 | 11.5 |
| Gingival findings | 274 | 60.4 | 14 | 53.8 | 51 | 11.2 | 2 | 7.7 | 48 | 10.6 | 5 | 19.2 | 21 | 4.6 | 2 | 7.7 | 60 | 13.2 | 3 | 11.5 |
| Soft tissue findings | 257 | 56.6 | 15 | 57.7 | 54 | 11.9 | -- | -- | 63 | 13.9 | 4 | 15.4 | 20 | 4.4 | 4 | 15.4 | 60 | 13.2 | 3 | 11.5 |
| Probe depths | 240 | 53.0 | 11 | 42.3 | 51 | 11.3 | 1 | 3.8 | 77 | 17.0 | 6 | 23.1 | 30 | 6.6 | 1 | 3.8 | 55 | 12.1 | 7 | 26.9 |
| Anamolies | 240 | 53.1 | 16 | 61.5 | 42 | 9.3 | 1 | 3.8 | 46 | 10.2 | 1 | 3.8 | 37 | 8.2 | 2 | 7.7 | 87 | 19.2 | 6 | 23.1 |
| Occlusal findings | 197 | 43.7 | 9 | 34.6 | 39 | 8.6 | 1 | 3.8 | 51 | 11.3 | 4 | 15.4 | 41 | 9.1 | 5 | 19.2 | 123 | 27.3 | 7 | 26.9 |
| Existing restorations | 162 | 35.9 | 8 | 30.8 | 19 | 4.2 | 2 | 7.7 | 46 | 10.2 | 6 | 23.1 | 54 | 12.0 | 4 | 15.4 | 170 | 37.7 | 6 | 23.1 |
| Recall Patient Visit | | | | | | | | | | | | | | | | | | | | |
| Carious lesions | 363 | 79.8 | 16 | 61.5 | 27 | 5.9 | 5 | 19.2 | 27 | 5.9 | 2 | 7.7 | 12 | 2.6 | 1 | 3.8 | 26 | 5.7 | 2 | 7.7 |
| Gingival findings | 298 | 65.6 | 14 | 53.8 | 68 | 15.0 | 5 | 19.2 | 49 | 10.8 | 4 | 15.4 | 16 | 3.5 | 1 | 3.8 | 23 | 5.1 | 2 | 7.7 |
| Soft tissue findings | 292 | 64.2 | 14 | 53.8 | 67 | 14.7 | 3 | 11.5 | 59 | 13.0 | 6 | 23.1 | 18 | 4.0 | 1 | 3.8 | 19 | 4.2 | 2 | 7.7 |
| Probe depths | 239 | 52.8 | 10 | 38.5 | 77 | 17.0 | 1 | 3.8 | 93 | 20.5 | 8 | 30.8 | 21 | 4.6 | 1 | 3.8 | 23 | 5.1 | 6 | 23.1 |
| Anamolies | 229 | 50.6 | 13 | 50.0 | 50 | 11.0 | 3 | 11.5 | 56 | 12.4 | 3 | 11.5 | 48 | 10.6 | 2 | 7.7 | 70 | 15.5 | 5 | 19.2 |
| Occlusal findings | 200 | 44.2 | 7 | 26.9 | 50 | 11.0 | 1 | 3.8 | 59 | 13.0 | 6 | 23.1 | 44 | 9.7 | 5 | 19.2 | 100 | 22.1 | 7 | 26.9 |
| Existing restorations | 127 | 28.2 | 7 | 26.9 | 21 | 4.7 | 2 | 7.7 | 46 | 10.2 | 4 | 15.4 | 75 | 16.7 | 5 | 19.2 | 181 | 40.2 | 8 | 30.8 |

96 97

TABLE 27 FREQUENCY THAT TRADITIONAL AND NONTRADITIONAL DENTAL HYGIENISTS PROVIDE RADIOGRAPHIC AND DIAGNOSTIC SERVICES FOR CHILD PATIENTS - 1986

| | Almost all the Time | | | | Most of the Time | | | | Sometimes | | | | Seldom | | | | Never | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Trad. | | N/Trad. | | Trad. | | N/Trad. | | Trad. | | N/Trad. | | Trad. | | N/Trad. | | Trad. | | N/Trad. | |
| | No. | % | No. | % | No. | % | No. | % | No. | % | No. | % | No. | % | No. | % | No. | % | No. | % |
| Process film | 299 | 69.4 | 13 | 56.5 | 56 | 13.0 | 1 | 4.3 | 38 | 8.8 | 3 | 13.0 | 11 | 2.6 | 3 | 13.0 | 27 | 6.3 | 3 | 13.0 |
| Mount film | 272 | 63.0 | 13 | 56.5 | 58 | 13.4 | 1 | 4.3 | 45 | 10.4 | 4 | 17.4 | 15 | 3.5 | 2 | 8.7 | 42 | 9.7 | 3 | 13.0 |
| Expose bitewing x-rays | 255 | 59.3 | 9 | 39.1 | 87 | 20.2 | 5 | 21.7 | 48 | 11.2 | 4 | 17.4 | 13 | 3.0 | 2 | 8.7 | 27 | 6.3 | 3 | 13.0 |
| Interpret radiographs | 117 | 27.1 | 6 | 26.1 | 89 | 20.6 | 5 | 21.7 | 106 | 24.6 | 7 | 30.4 | 42 | 9.7 | 2 | 8.7 | 77 | 17.9 | 3 | 13.0 |
| Expose periapical x-rays | 84 | 19.6 | 4 | 18.2 | 65 | 15.2 | 2 | 9.1 | 200 | 46.7 | 9 | 40.9 | 44 | 10.3 | 4 | 18.2 | 35 | 8.2 | 3 | 13.6 |
| Expose panoramic x-rays | 61 | 14.2 | 3 | 13.0 | 24 | 5.6 | -- | -- | 99 | 23.1 | 9 | 39.1 | 31 | 7.2 | -- | -- | 214 | 49.9 | 11 | 47.8 |
| Expose full-mouth x-rays | 30 | 7.0 | 1 | 4.3 | 12 | 2.8 | 2 | 8.7 | 73 | 17.0 | 3 | 13.0 | 114 | 26.5 | 7 | 30.4 | 201 | 46.7 | 10 | 43.5 |
| Take impressions | 10 | 2.3 | -- | -- | 11 | 2.6 | 1 | 4.3 | 63 | 14.6 | 4 | 17.4 | 78 | 18.1 | 4 | 17.4 | 269 | 62.4 | 14 | 60.9 |
| Pour models | 8 | 1.9 | -- | -- | 9 | 2.1 | 1 | 4.3 | 58 | 13.5 | 3 | 13.0 | 72 | 16.7 | 5 | 21.7 | 283 | 65.8 | 14 | 60.9 |
| Diet histories | 5 | 1.2 | -- | -- | 8 | 1.9 | 1 | 4.3 | 63 | 14.6 | -- | -- | 82 | 19.0 | 8 | 34.8 | 274 | 63.4 | 14 | 60.9 |
| Finish models | 4 | 0.9 | -- | -- | 4 | 0.9 | -- | -- | 24 | 5.6 | 2 | 8.7 | 51 | 11.8 | 3 | 13.0 | 348 | 80.7 | 18 | 78.3 |
| Tooth vitality tests | 1 | 0.2 | -- | -- | -- | -- | -- | -- | 22 | 5.1 | 2 | 8.7 | 45 | 10.5 | 4 | 17.4 | 362 | 84.2 | 17 | 73.9 |
| Bacterial evaluations | 2 | 0.5 | -- | -- | 3 | 0.7 | 1 | 4.3 | 6 | 1.4 | 1 | 4.3 | 9 | 2.1 | 2 | 8.7 | 411 | 95.4 | 19 | 82.6 |

TABLE 28 FREQUENCY THAT TRADITIONAL AND NONTRADITIONAL DENTAL HYGIENISTS PROVIDE RADIOGRAPHIC AND DIAGNOSTIC SERVICES FOR ADULT PATIENTS - 1986

| | Almost all the Time | | | | Most of the Time | | | | Sometimes | | | | Seldom | | | | Never | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Trad. | | N/Trad. | | Trad. | | N/Trad. | | Trad. | | N/Trad. | | Trad. | | N/Trad. | | Trad. | | N/Trad. | |
| | No. | % | No. | % | No. | % | No. | % | No. | % | No. | % | No. | % | No. | % | No. | % | No. | % |
| Process film | 304 | 67.1 | 16 | 61.5 | 60 | 13.2 | 1 | 3.8 | 49 | 10.8 | 4 | 15.4 | 14 | 3.1 | 3 | 11.5 | 26 | 5.7 | 2 | 7.7 |
| Mount film | 275 | 60.4 | 16 | 61.5 | 64 | 14.1 | 1 | 3.8 | 58 | 12.7 | 5 | 19.2 | 20 | 4.4 | 2 | 7.7 | 38 | 8.4 | 2 | 7.7 |
| Expose bitewing x-rays | 274 | 60.5 | 12 | 46.2 | 105 | 23.2 | 3 | 11.5 | 43 | 9.5 | 6 | 23.1 | 7 | 1.5 | 2 | 7.7 | 24 | 5.3 | 3 | 11.5 |
| Interpret radiographs | 117 | 25.7 | 7 | 26.9 | 96 | 21.1 | 4 | 15.4 | 118 | 25.9 | 7 | 26.9 | 43 | 9.5 | 4 | 15.4 | 81 | 17.8 | 4 | 15.4 |
| Expose periapical x-rays | 102 | 22.5 | 7 | 26.9 | 85 | 18.8 | 2 | 7.7 | 224 | 49.4 | 11 | 42.3 | 19 | 4.2 | 3 | 11.5 | 23 | 5.1 | 3 | 11.5 |
| Expose full mouth x-rays | 82 | 18.1 | 5 | 19.2 | 48 | 10.6 | 2 | 7.7 | 155 | 34.1 | 7 | 26.9 | 77 | 17.0 | 7 | 26.9 | 92 | 20.3 | 5 | 19.2 |
| Expose panoramic x-ray | 73 | 16.2 | 3 | 11.5 | 38 | 8.4 | 1 | 3.8 | 88 | 19.5 | 9 | 34.6 | 29 | 6.4 | 2 | 7.7 | 224 | 49.6 | 11 | 42.3 |
| Take impressions | 14 | 3.1 | 1 | 3.8 | 15 | 3.3 | 2 | 7.7 | 93 | 20.5 | 6 | 23.1 | 105 | 23.1 | 5 | 19.2 | 227 | 50.0 | 12 | 46.2 |
| Pour models | 13 | 2.9 | 1 | 3.8 | 10 | 2.2 | 2 | 7.7 | 83 | 18.3 | 4 | 15.4 | 90 | 19.8 | 6 | 23.1 | 258 | 56.8 | 13 | 50.0 |
| Diet histories | 10 | 2.2 | 1 | 3.8 | 6 | 1.3 | 1 | 3.8 | 68 | 14.9 | -- | -- | 87 | 19.1 | 8 | 30.8 | 284 | 62.4 | 16 | 61.5 |
| Bacterial evaluations | 10 | 2.2 | -- | -- | 4 | 0.9 | 1 | 3.8 | 11 | 2.4 | 3 | 11.5 | 7 | 1.5 | 3 | 11.5 | 422 | 93.0 | 19 | 73.1 |
| Finish models | 7 | 1.5 | 1 | 3.8 | 5 | 1.1 | 1 | 3.8 | 33 | 7.3 | 3 | 11.5 | 63 | 13.9 | 5 | 19.2 | 346 | 76.2 | 16 | 61.5 |
| Tooth vitality test | 3 | 0.7 | 1 | 3.8 | 2 | 0.4 | 1 | 3.8 | 39 | 8.6 | 3 | 11.5 | 57 | 12.6 | 5 | 19.2 | 353 | 77.8 | 16 | 61.5 |

TABLE 29 FREQUENCY THAT TRADITIONAL AND NONTRADITIONAL DENTAL HYGIENISTS MAKE CONSULTATIONS AND REFERRRALS FOR CHILD PATIENTS - 1986

| | Almost all the Time | | | | Most of the Time | | | | Sometimes | | | | Seldom | | | | Never | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Trad. | | N/Trad. | | Trad. | | N/Trad. | | Trad. | | N/Trad. | | Trad. | | N/Trad. | | Trad. | | N/Trad. | |
| | No. | % | No. | % | No. | % | No. | % | No. | % | No. | % | No. | % | No. | % | No. | % | No. | % |
| Consultations | | | | | | | | | | | | | | | | | | | | |
| Dentist-treatment needs | 158 | 36.8 | 7 | 30.4 | 91 | 21.2 | 5 | 21.7 | 126 | 29.4 | 7 | 30.4 | 20 | 4.7 | 3 | 13.0 | 34 | 7.9 | 1 | 4.3 |
| Dentist-medical history | 139 | 32.3 | 8 | 34.8 | 74 | 17.2 | 2 | 8.7 | 164 | 38.1 | 12 | 52.2 | 32 | 7.4 | -- | -- | 22 | 5.1 | 1 | 4.3 |
| Dentist-medications | 108 | 25.1 | 6 | 26.1 | 56 | 13.0 | 3 | 13.0 | 181 | 42.1 | 11 | 47.8 | 45 | 10.5 | 2 | 8.7 | 40 | 9.3 | 1 | 4.3 |
| Physician-medical history | 40 | 9.3 | 2 | 8.7 | 31 | 7.2 | 1 | 4.3 | 188 | 43.8 | 13 | 56.5 | 84 | 19.6 | 5 | 21.7 | 86 | 20.0 | 2 | 8.7 |
| Physician-medications | 35 | 8.2 | 2 | 8.7 | 34 | 8.0 | 1 | 4.3 | 157 | 36.9 | 9 | 39.1 | 94 | 22.1 | 7 | 30.4 | 106 | 24.9 | 4 | 17.4 |
| Referrals | | | | | | | | | | | | | | | | | | | | |
| Dentist-treatment needs | 203 | 47.7 | 9 | 39.1 | 63 | 14.8 | 6 | 26.1 | 71 | 16.7 | 6 | 26.1 | 22 | 5.2 | -- | -- | 67 | 15.7 | 2 | 8.7 |
| Dental specialist | 49 | 11.4 | 3 | 13.0 | 67 | 15.6 | 3 | 13.0 | 151 | 35.2 | 8 | 34.8 | 58 | 13.5 | 2 | 8.7 | 104 | 24.2 | 7 | 30.4 |
| Physician | 20 | 4.7 | 2 | 8.7 | 20 | 4.7 | 1 | 4.3 | 119 | 27.7 | 9 | 39.1 | 116 | 27.0 | 5 | 21.7 | 155 | 36.0 | 6 | 26.1 |
| Speech pathologist | 3 | 0.7 | 2 | 8.7 | 6 | 1.4 | -- | -- | 34 | 7.9 | -- | -- | 105 | 24.5 | 4 | 17.4 | 280 | 65.4 | 17 | 73.9 |

TABLE 30 FREQUENCY THAT TRADITIONAL AND NONTRADITIONAL DENTAL HYGIENISTS MAKE CONSULTATIONS AND REFERRALS FOR ADULT PATIENTS - 1986

| | Almost all the Time | | | | Most of the Time | | | | Sometimes | | | | Seldom | | | | Never | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Trad. | | N/Trad. | | Trad. | | N/Trad. | | Trad. | | N/Trad. | | Trad. | | N/Trad. | | Trad. | | N/Trad. | |
| | No. | % | No. | % | No. | % | No. | % | No. | % | No. | % | No. | % | No. | % | No. | % | No. | % |
| Consultations | | | | | | | | | | | | | | | | | | | | |
| Dentist-treatment needs | 166 | 36.6 | 7 | 26.9 | 105 | 23.2 | 5 | 19.2 | 139 | 30.7 | 10 | 38.5 | 18 | 4.0 | 3 | 11.5 | 25 | 5.5 | 1 | 3.8 |
| Dentist-medical history | 155 | 34.1 | 8 | 30.8 | 79 | 17.4 | 4 | 15.4 | 180 | 39.6 | 12 | 46.2 | 24 | 5.3 | 1 | 3.8 | 16 | 3.5 | 1 | 3.8 |
| Dentist-medications | 117 | 25.8 | 6 | 23.1 | 64 | 14.1 | 4 | 15.4 | 196 | 43.4 | 12 | 46.2 | 45 | 9.9 | 3 | 11.5 | 31 | 6.8 | 1 | 3.8 |
| Physician-medical history | 43 | 9.5 | 3 | 11.5 | 36 | 7.9 | 2 | 7.7 | 212 | 46.8 | 14 | 53.8 | 84 | 18.5 | 5 | 19.2 | 78 | 17.2 | 2 | 7.7 |
| Physician-medications | 39 | 8.7 | 3 | 11.5 | 36 | 8.0 | 1 | 3.8 | 180 | 40.0 | 11 | 42.3 | 96 | 21.3 | 8 | 30.8 | 99 | 22.0 | 3 | 11.5 |
| Referrals | | | | | | | | | | | | | | | | | | | | |
| Dentist treatment needs | 215 | 47.8 | 12 | 46.2 | 68 | 15.1 | 7 | 26.9 | 86 | 19.1 | 6 | 23.1 | 20 | 4.4 | 1 | 3.8 | 61 | 13.6 | -- | -- |
| Dental Specialist | 56 | 12.4 | 4 | 15.4 | 74 | 16.3 | 3 | 11.5 | 169 | 37.3 | 10 | 38.5 | 54 | 11.9 | 3 | 11.5 | 100 | 22.1 | 6 | 23.1 |
| Physician | 22 | 4.9 | 2 | 7.7 | 23 | 5.1 | 1 | 3.8 | 138 | 30.5 | 12 | 46.2 | 128 | 28.3 | 6 | 23.1 | 142 | 31.3 | 5 | 19.2 |
| Speech Pathologist | 3 | 0.5 | 2 | 7.7 | 6 | 1.3 | -- | -- | 26 | 5.8 | -- | -- | 94 | 20.9 | 6 | 23.1 | 321 | 71.3 | 18 | 69.2 |

TABLE 31 FREQUENCY THAT TRADITIONAL AND NONTRADITIONAL DENTAL HYGIENISTS PROVIDE TREATMENT PLANNING FOR CHILD PATIENTS - 1986

| | Almost all the Time | | | | Most of the Time | | | | Sometimes | | | | Seldom | | | | Never | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Trad. | | N/Trad. | | Trad. | | N/Trad. | | Trad. | | N/Trad. | | Trad. | | N/Trad. | | Trad. | | N/Trad. | |
| | No. | % | No. | % | No. | % | No. | % | No. | % | No. | % | No. | % | No. | % | No. | % | No. | % |
| Determine Recall Interval | 328 | 76.1 | 15 | 68.2 | 58 | 13.5 | 2 | 9.1 | 14 | 3.2 | 1 | 4.5 | 3 | 0.7 | -- | -- | 28 | 6.5 | 4 | 18.2 |
| Initial Patient Visit | | | | | | | | | | | | | | | | | | | | |
| Develop dental Hygiene plan | 247 | 57.6 | 11 | 50.0 | 59 | 13.8 | 3 | 13.6 | 35 | 8.2 | 2 | 9.1 | 13 | 3.0 | 1 | 4.5 | 75 | 17.5 | 5 | 22.7 |
| Record written DH plan | 244 | 56.7 | 11 | 50.0 | 45 | 10.5 | 4 | 18.2 | 30 | 7.0 | 2 | 9.1 | 26 | 6.0 | -- | -- | 85 | 19.8 | 5 | 22.7 |
| Develop dental Tx plan | 59 | 13.8 | 4 | 18.2 | 41 | 9.6 | -- | -- | 49 | 11.4 | 2 | 9.1 | 58 | 13.5 | 5 | 22.7 | 222 | 51.7 | 11 | 50.0 |
| Recall Patient Visit | | | | | | | | | | | | | | | | | | | | |
| Develop dental hygiene plan | 262 | 61.2 | 13 | 59.1 | 65 | 15.2 | 4 | 18.2 | 29 | 6.8 | 1 | 4.5 | 12 | 2.8 | 2 | 9.1 | 60 | 14.0 | 2 | 9.1 |
| Record written DH plan | 255 | 59.4 | 14 | 63.6 | 47 | 11.0 | 4 | 18.2 | 28 | 6.5 | 1 | 4.5 | 26 | 6.1 | -- | -- | 73 | 17.0 | 3 | 13.6 |
| Develop dental Tx plan | 65 | 15.2 | 5 | 22.7 | 45 | 10.5 | -- | -- | 50 | 11.7 | 1 | 4.5 | 57 | 13.3 | 5 | 22.7 | 212 | 49.4 | 11 | 50.0 |

TABLE 32 FREQUENCY THAT TRADITIONAL AND NONTRADITIONAL DENTAL HYGIENISTS PROVIDE TREATMENT PLANNING FOR ADULT PATIENTS - 1986

| | Almost all the Time | | | | Most of the Time | | | | Sometimes | | | | Seldom | | | | Never | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Trad. | | N/Trad. | | Trad. | | N/Trad. | | Trad. | | N/Trad. | | Trad. | | N/Trad. | | Trad. | | N/Trad. | |
| | No. | % | No. | % | No. | % | No. | % | No. | % | No. | % | No. | % | No. | % | No. | % | No. | % |
| Determine Recall Interval | 346 | 76.2 | 18 | 72.0 | 73 | 16.1 | 3 | 12.0 | 17 | 3.7 | 2 | 8.0 | 4 | 0.9 | -- | -- | 14 | 3.1 | 2 | 8.0 |
| Initial Patient Visit | | | | | | | | | | | | | | | | | | | | |
| Develop dental hygiene Tx plan | 266 | 58.6 | 11 | 44.0 | 68 | 15.0 | 4 | 16.0 | 45 | 9.9 | 4 | 16.0 | 15 | 3.3 | 1 | 4.0 | 60 | 13.2 | 5 | 20.0 |
| Record written D.H. Tx plan | 258 | 56.8 | 11 | 44.0 | 55 | 12.1 | 4 | 16.0 | 42 | 9.3 | 4 | 16.0 | 23 | 5.1 | 1 | 4.0 | 76 | 16.7 | 5 | 20.0 |
| Develop dental Tx plan | 64 | 14.2 | 3 | 12.0 | 41 | 9.1 | -- | -- | 55 | 12.2 | 4 | 16.0 | 64 | 14.2 | 5 | 20.0 | 228 | 50.4 | 13 | 52.0 |
| Recall Patient Visit | | | | | | | | | | | | | | | | | | | | |
| Develop D.H. Tx plan | 286 | 63.0 | 13 | 52.0 | 82 | 18.1 | 5 | 20.0 | 39 | 8.6 | 2 | 8.0 | 8 | 1.8 | 2 | 8.0 | 39 | 8.6 | 3 | 12.0 |
| Record written D.H. Tx Plan | 280 | 61.7 | 14 | 56.0 | 61 | 13.4 | 4 | 16.0 | 42 | 9.3 | 2 | 8.0 | 18 | 4.0 | 1 | 4.0 | 53 | 11.7 | 4 | 16.0 |
| Develop dental Tx plan | 75 | 16.6 | 4 | 16.0 | 47 | 10.4 | -- | -- | 57 | 12.6 | 2 | 8.0 | 60 | 13.3 | 5 | 20.0 | 213 | 47.1 | 14 | 56.0 |

TABLE 33 FREQUENCY THAT TRADITIONAL AND NONTRADITIONAL DENTAL HYGIENISTS PROVIDE PREVENTIVE AND PERIODONTAL PROCEDURES FOR CHILD PATIENTS - 1986

| | Almost all the Time | | | | Most of the Time | | | | Sometimes | | | | Seldom | | | | Never | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Trad. | | N/Trad. | | Trad. | | N/Trad. | | Trad. | | N/Trad. | | Trad. | | N/Trad. | | Trad. | | N/Trad. | |
| | No. | % | No. | % | No. | % | No. | % | No. | % | No. | % | No. | % | No. | % | No. | % | No. | % |
| Sealants | 82 | 19.0 | 6 | 26.1 | 66 | 15.3 | 1 | 4.3 | 96 | 22.2 | 7 | 30.4 | 44 | 10.2 | -- | -- | 144 | 33.3 | 9 | 39.1 |
| Fluorides | | | | | | | | | | | | | | | | | | | | |
| Topical applications | 309 | 71.4 | 16 | 69.6 | 54 | 12.5 | 2 | 8.7 | 31 | 7.2 | 1 | 4.3 | 13 | 3.0 | 2 | 8.7 | 26 | 6.0 | 2 | 8.7 |
| Recommend gel | 98 | 22.7 | 2 | 8.7 | 80 | 18.6 | 7 | 30.4 | 146 | 33.9 | 4 | 17.4 | 34 | 7.9 | 4 | 17.4 | 73 | 16.9 | 6 | 26.1 |
| Recommend rinse | 91 | 21.0 | 4 | 17.4 | 94 | 21.7 | 7 | 30.4 | 174 | 40.2 | 8 | 34.8 | 26 | 6.0 | 2 | 8.7 | 48 | 11.1 | 2 | 8.7 |
| Recommend supplement | 47 | 10.9 | 2 | 8.7 | 40 | 9.3 | 3 | 13.0 | 101 | 23.4 | 3 | 13.0 | 86 | 20.0 | 6 | 26.1 | 157 | 36.4 | 9 | 39.1 |
| Polish | | | | | | | | | | | | | | | | | | | | |
| Rubber cup | 389 | 90.3 | 16 | 69.6 | 20 | 4.6 | 1 | 4.3 | 9 | 2.1 | 1 | 4.3 | 5 | 1.2 | 1 | 4.3 | 8 | 1.9 | 4 | 17.4 |
| Prophy jet | 19 | 4.4 | 1 | 4.3 | 7 | 1.6 | -- | -- | 32 | 7.5 | -- | -- | 19 | 4.4 | 3 | 13.0 | 351 | 82.0 | 19 | 82.6 |
| Scale | | | | | | | | | | | | | | | | | | | | |
| Supra-gingivally | 330 | 76.6 | 16 | 69.6 | 22 | 5.1 | -- | -- | 64 | 14.8 | 3 | 13.0 | 9 | 2.1 | 2 | 8.7 | 6 | 1.4 | 2 | 8.7 |
| Ultrasonic-supra. | 50 | 11.6 | 4 | 18.2 | 6 | 1.4 | -- | -- | 42 | 9.8 | 3 | 13.6 | 90 | 20.9 | 2 | 9.1 | 242 | 56.3 | 13 | 59.1 |
| Subgingivally | 219 | 50.8 | 13 | 56.5 | 28 | 6.5 | -- | -- | 95 | 22.0 | 5 | 21.7 | 54 | 12.5 | 2 | 8.7 | 35 | 8.1 | 3 | 13.0 |
| Ultrasonic-sub. | 39 | 9.1 | 4 | 18.2 | 4 | 0.9 | -- | -- | 30 | 7.0 | 2 | 9.1 | 61 | 14.3 | 2 | 9.1 | 294 | 68.7 | 14 | 63.6 |
| Root plane | 48 | 11.2 | 2 | 8.7 | 9 | 2.1 | 2 | 8.7 | 24 | 5.6 | 1 | 4.3 | 69 | 16.1 | 4 | 17.4 | 279 | 65.0 | 14 | 60.9 |
| Curettage | 20 | 4.7 | 1 | 4.3 | 7 | 1.6 | 1 | 4.3 | 16 | 3.7 | 2 | 8.7 | 42 | 9.8 | 3 | 13.0 | 343 | 80.1 | 16 | 69.6 |
| Gingivectomy | 3 | 0.7 | -- | -- | -- | -- | -- | -- | 4 | 0.9 | 1 | 4.3 | 7 | 1.6 | -- | -- | 416 | 96.7 | 22 | 95.7 |

TABLE 34 FREQUENCY THAT TRADITIONAL AND NONTRADITIONAL DENTAL HYGIENISTS PROVIDE PREVENTIVE AND PERIODONTAL PROCEDURES FOR ADULT PATIENTS - 1986

| | Almost all the Time | | | | Most of the Time | | | | Sometimes | | | | Seldom | | | | Never | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Trad. | | N/Trad. | | Trad. | | N/Trad. | | Trad. | | N/Trad. | | Trad. | | N/Trad. | | Trad. | | N/Trad. | |
| | No. | % | No. | % | No. | % | No. | % | No. | % | No. | % | No. | % | No. | % | No. | % | No. | % |
| Sealants | 27 | 6.0 | 4 | 15.4 | 21 | 4.7 | 1 | 3.8 | 46 | 10.2 | 5 | 19.2 | 59 | 13.1 | 2 | 7.7 | 296 | 65.9 | 14 | 53.8 |
| Fluorides | | | | | | | | | | | | | | | | | | | | |
| Topical application | 123 | 27.2 | 10 | 38.5 | 30 | 6.6 | 2 | 7.7 | 106 | 23.5 | 7 | 26.9 | 110 | 24.3 | 4 | 15.4 | 83 | 18.4 | 3 | 11.5 |
| Recommend gel | 88 | 19.3 | 4 | 15.4 | 79 | 17.4 | 7 | 26.9 | 177 | 38.9 | 5 | 19.2 | 43 | 9.5 | 4 | 15.4 | 68 | 14.9 | 6 | 23.1 |
| Recommend rinse | 83 | 18.2 | 5 | 19.2 | 81 | 17.8 | 6 | 23.1 | 192 | 42.2 | 9 | 34.6 | 40 | 8.8 | 4 | 15.4 | 59 | 13.0 | 2 | 7.7 |
| Recommend supplement | 36 | 8.0 | 3 | 11.5 | 26 | 5.8 | 3 | 11.5 | 69 | 15.3 | 3 | 11.5 | 82 | 18.1 | 6 | 23.1 | 239 | 52.9 | 11 | 42.3 |
| Polish | | | | | | | | | | | | | | | | | | | | |
| Rubber cup | 399 | 87.7 | 21 | 80.8 | 26 | 5.7 | 1 | 3.8 | 18 | 4.0 | 3 | 11.5 | 9 | 2.0 | -- | -- | 3 | 0.7 | 1 | 3.8 |
| Prophy jet | 48 | 10.6 | 3 | 11.5 | 20 | 4.4 | -- | -- | 42 | 9.3 | 2 | 7.7 | 11 | 2.4 | 4 | 15.4 | 333 | 73.3 | 17 | 65.4 |
| Scale | | | | | | | | | | | | | | | | | | | | |
| Supra-gingivally | 447 | 98.2 | 23 | 88.5 | 5 | 1.1 | 1 | 3.8 | 1 | 0.2 | 1 | 3.8 | -- | -- | -- | -- | 2 | 0.4 | 1 | 3.8 |
| Ultrasonic-supra. | 154 | 33.9 | 10 | 38.5 | 63 | 13.9 | 3 | 11.5 | 185 | 40.7 | 9 | 34.6 | 22 | 4.8 | 1 | 3.8 | 30 | 6.6 | 3 | 11.5 |
| Subgingivally | 435 | 95.6 | 23 | 88.5 | 13 | 2.9 | 1 | 3.8 | 5 | 1.1 | 1 | 3.8 | 1 | 0.2 | -- | -- | 1 | 0.2 | 1 | 3.8 |
| Ultrasonic-sub. | 144 | 31.7 | 10 | 38.5 | 46 | 10.1 | 2 | 7.7 | 185 | 40.7 | 8 | 30.8 | 33 | 7.3 | 1 | 3.8 | 46 | 10.1 | 5 | 19.2 |
| Root Plane | 229 | 50.3 | 14 | 53.8 | 91 | 20.0 | 4 | 15.4 | 116 | 25.5 | 6 | 23.1 | 6 | 1.3 | 1 | 3.8 | 13 | 2.9 | 1 | 3.8 |
| Curettage | 87 | 19.2 | 5 | 19.2 | 62 | 13.7 | 4 | 15.4 | 136 | 30.1 | 5 | 19.2 | 50 | 11.1 | 6 | 23.1 | 117 | 25.9 | 6 | 23.1 |
| Gingivectomy | 4 | 0.9 | -- | -- | 1 | 0.2 | -- | -- | 16 | 3.5 | 1 | 4.0 | 19 | 4.2 | 1 | 4.0 | 413 | 91.2 | 23 | 92.0 |

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TABLE 35 FREQUENCY THAT TRADITIONAL AND NONTRADITIONAL DENTAL HYGIENISTS PROVIDE PATIENT EDUCATION FOR CHILD PATIENTS - 1986

| | Almost all the Time | | | | Most of the Time | | | | Sometimes | | | | Seldom | | | | Never | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Trad. | | N/Trad. | | Trad. | | N/Trad. | | Trad. | | N/Trad. | | Trad. | | N/Trad. | | Trad. | | N/Trad. | |
| | No. | % | No. | % | No. | % | No. | % | No. | % | No. | % | No. | % | No. | % | No. | % | No. | % |
| Toothbrushing information | 303 | 70.3 | 17 | 73.9 | 96 | 22.3 | 4 | 17.4 | 25 | 5.8 | -- | -- | 2 | 0.5 | 1 | 4.3 | 5 | 1.2 | 1 | 4.3 |
| Caries prevention | 252 | 58.6 | 15 | 65.2 | 114 | 26.5 | 5 | 21.7 | 50 | 11.6 | 2 | 8.7 | 4 | 0.9 | -- | -- | 10 | 2.3 | 1 | 4.3 |
| Flossing information | 234 | 54.3 | 11 | 47.8 | 77 | 17.9 | 4 | 17.4 | 85 | 19.7 | 7 | 30.4 | 23 | 5.3 | -- | -- | 12 | 2.8 | 1 | 4.3 |
| Restorative/ Tx needs | 148 | 34.5 | 9 | 39.1 | 107 | 24.9 | 6 | 26.1 | 105 | 24.5 | 4 | 17.4 | 20 | 4.7 | 3 | 13.0 | 49 | 11.4 | 1 | 4.3 |
| Fluorides | 134 | 31.0 | 9 | 39.1 | 130 | 30.1 | 7 | 30.4 | 125 | 28.9 | 5 | 21.7 | 25 | 5.8 | 1 | 4.3 | 18 | 4.2 | 1 | 4.3 |
| Toothbrushing-in mouth | 122 | 28.3 | 10 | 43.5 | 79 | 18.3 | 1 | 4.3 | 149 | 34.6 | 7 | 30.4 | 50 | 11.6 | 4 | 17.4 | 31 | 7.2 | 1 | 4.3 |
| Sealants | 109 | 25.3 | 8 | 34.8 | 109 | 25.3 | 4 | 17.4 | 118 | 27.4 | 6 | 26.1 | 42 | 9.8 | 3 | 13.0 | 52 | 12.1 | 2 | 8.7 |
| Written reports Pat. progress | 109 | 25.3 | 8 | 34.8 | 30 | 7.0 | -- | -- | 49 | 11.4 | 4 | 17.4 | 60 | 14.0 | 2 | 8.7 | 182 | 42.3 | 9 | 39.1 |
| Sugar consumption | 98 | 22.8 | 6 | 26.1 | 102 | 23.8 | 7 | 30.4 | 139 | 32.4 | 8 | 34.8 | 51 | 11.9 | 1 | 4.3 | 39 | 9.1 | 1 | 4.3 |
| Flossing-in mouth | 94 | 22.0 | 6 | 26.1 | 68 | 15.9 | 1 | 4.3 | 147 | 34.4 | 10 | 43.5 | 63 | 14.8 | 4 | 17.4 | 55 | 12.9 | 2 | 8.7 |
| Periodontal disease prevention | 88 | 21.0 | 11 | 47.8 | 36 | 8.6 | 1 | 4.3 | 106 | 25.3 | 3 | 13.0 | 101 | 24.1 | 5 | 21.7 | 88 | 21.0 | 3 | 13.0 |
| Antimicrobial agents | 37 | 8.7 | 2 | 9.1 | 40 | 9.4 | 2 | 9.1 | 97 | 22.8 | 4 | 18.2 | 89 | 20.9 | 5 | 22.7 | 163 | 38.3 | 9 | 40.9 |
| Formal plaque control | 29 | 6.8 | 1 | 4.3 | 20 | 4.7 | -- | -- | 52 | 12.1 | 5 | 21.7 | 65 | 15.2 | 3 | 13.0 | 263 | 61.3 | 14 | 60.9 |
| Formal nutritional counseling | 10 | 2.3 | -- | -- | 6 | 1.4 | -- | -- | 27 | 6.3 | 2 | 8.7 | 77 | 17.9 | 6 | 26.1 | 309 | 72.0 | 15 | 65.2 |

TABLE 36 FREQUENCY THAT TRADTIONAL AND NONTRADITIONAL DENTAL HYGIENISTS PROVIDE PATIENT EDUCATION FOR ADULT PATIENTS - 1986

| | Almost all the Time | | | | Most of the Time | | | | Sometimes | | | | Seldom | | | | Never | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Trad. | | N/Trad. | | Trad. | | N/Trad. | | Trad. | | N/Trad. | | Trad. | | N/Trad. | | Trad. | | N/Trad. | |
| | No. | % | No. | % | No. | % | No. | % | No. | % | No. | % | No. | % | No. | % | No. | % | No. | % |
| Toothbrushing information | 309 | 68.2 | 21 | 80.8 | 106 | 23.4 | 4 | 15.4 | 37 | 8.2 | -- | -- | -- | -- | 1 | 3.8 | 1 | 0.2 | -- | -- |
| Flossing information | 294 | 64.9 | 19 | 73.1 | 119 | 26.3 | 4 | 15.4 | 37 | 8.2 | 2 | 7.7 | 1 | 0.2 | 1 | 3.8 | 2 | 0.4 | -- | -- |
| Periodontal disease prevention | 310 | 68.4 | 18 | 69.2 | 107 | 23.6 | 6 | 23.1 | 31 | 6.8 | 2 | 7.7 | 2 | 0.4 | -- | -- | 3 | 0.7 | -- | -- |
| Caries prevention | 245 | 54.1 | 15 | 57.7 | 124 | 27.4 | 8 | 30.8 | 70 | 15.5 | 3 | 11.5 | 5 | 1.1 | -- | -- | 9 | 2.0 | -- | -- |
| Restorative/ Tx needs | 179 | 39.6 | 11 | 42.3 | 123 | 27.2 | 8 | 30.8 | 92 | 20.4 | 3 | 11.5 | 22 | 4.9 | 4 | 15.4 | 36 | 8.0 | -- | -- |
| Fluorides | 123 | 27.4 | 9 | 34.6 | 111 | 24.7 | 6 | 23.1 | 153 | 34.1 | 7 | 26.9 | 35 | 7.8 | 3 | 11.5 | 27 | 6.0 | 1 | 3.8 |
| Written reports Pat. progress | 119 | 26.4 | 12 | 46.2 | 35 | 7.8 | -- | -- | 50 | 11.1 | 4 | 15.4 | 58 | 12.9 | 2 | 7.7 | 189 | 41.9 | 8 | 30.8 |
| Flossing- in mouth | 110 | 24.3 | 11 | 42.3 | 81 | 17.9 | 2 | 7.7 | 163 | 36.1 | 7 | 26.9 | 56 | 12.4 | 6 | 23.1 | 42 | 9.3 | -- | -- |
| Toothbrushing- in mouth | 105 | 23.3 | 12 | 46.2 | 76 | 16.9 | 1 | 3.8 | 154 | 34.1 | 7 | 26.9 | 68 | 15.1 | 6 | 23.1 | 48 | 10.6 | -- | -- |
| Sealants | 80 | 18.4 | 7 | 26.9 | 75 | 17.2 | 5 | 19.2 | 105 | 24.1 | 3 | 11.5 | 64 | 14.7 | 4 | 15.4 | 111 | 25.5 | 7 | 26.9 |
| Sugar consumption | 82 | 18.3 | 4 | 15.4 | 76 | 16.9 | 5 | 19.2 | 173 | 38.5 | 12 | 46.2 | 72 | 16.0 | 4 | 15.4 | 46 | 10.2 | 1 | 3.8 |
| Antimicrobial agents | 68 | 15.1 | 5 | 19.2 | 67 | 14.9 | 4 | 15.4 | 139 | 30.8 | 6 | 23.1 | 76 | 16.9 | 4 | 15.4 | 101 | 22.4 | 7 | 26.9 |
| Formal plaque control | 39 | 8.6 | 3 | 11.5 | 23 | 5.1 | -- | -- | 65 | 14.4 | 6 | 23.1 | 68 | 15.1 | 3 | 11.5 | 256 | 56.8 | 14 | 53.8 |
| Formal nutritional counseling | 11 | 2.4 | 1 | 3.8 | 7 | 1.6 | -- | -- | 32 | 7.1 | 2 | 7.7 | 89 | 19.8 | 7 | 26.9 | 311 | 69.1 | 16 | 61.5 |

TABLE 37 FREQUENCY THAT TRADITIONAL AND NONTRADITIONAL DENTAL HYGIENISTS PROVIDE GROUP PROGRAMS FOR CHILD AND ADULT PATIENTS - 1986

| | Almost all the Time | | | | Most of the Time | | | | Sometimes | | | | Seldom | | | | Never | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Trad. | | N/Trad. | | Trad. | | N/Trad. | | Trad. | | N/Trad. | | Trad. | | N/Trad. | | Trad. | | N/Trad. | |
| | No. | % | No. | % | No. | % | No. | % | No. | % | No. | % | No. | % | No. | % | No. | % | No. | % |
| Child Patients | | | | | | | | | | | | | | | | | | | | |
| Plan program | 6 | 1.4 | 2 | 9.1 | 4 | 0.9 | -- | -- | 20 | 4.7 | 5 | 22.7 | 28 | 6.5 | 4 | 18.2 | 371 | 86.5 | 11 | 50.0 |
| Provide program | 4 | 0.9 | 2 | 9.1 | 3 | 0.7 | 2 | 9.1 | 33 | 7.7 | 2 | 9.1 | 30 | 7.0 | 5 | 22.7 | 359 | 83.7 | 11 | 50.0 |
| Evaluate program | 2 | 0.5 | 2 | 9.1 | -- | -- | -- | -- | 9 | 2.1 | 3 | 13.6 | 21 | 4.9 | 2 | 9.1 | 397 | 92.5 | 15 | 68.2 |
| Written evaluation | 2 | 0.5 | 3 | 13.6 | -- | -- | -- | -- | 5 | 1.2 | 2 | 9.1 | 14 | 3.3 | -- | -- | 407 | 95.1 | 17 | 77.3 |
| Screenings | 1 | 0.2 | 4 | 17.4 | 2 | 0.5 | 2 | 8.7 | 20 | 4.7 | 2 | 8.7 | 26 | 6.1 | 3 | 13.0 | 379 | 88.6 | 12 | 52.2 |
| Adult Patients | | | | | | | | | | | | | | | | | | | | |
| Plan program | 6 | 1.3 | 3 | 12.0 | 1 | 0.2 | -- | -- | 14 | 3.1 | 6 | 24.0 | 17 | 3.8 | 2 | 8.0 | 413 | 91.6 | 14 | 56.0 |
| Provide program | 4 | 0.9 | 3 | 12.0 | 1 | 0.2 | 1 | 4.0 | 22 | 4.9 | 4 | 16.0 | 16 | 3.5 | 3 | 12.0 | 408 | 90.5 | 14 | 56.0 |
| Evaluate program | 3 | 0.7 | 2 | 8.3 | -- | -- | -- | -- | 7 | 1.6 | 4 | 16.7 | 13 | 2.9 | 2 | 8.3 | 427 | 94.9 | 16 | 66.7 |
| Written evaluation | 3 | 0.7 | 4 | 16.7 | 1 | 0.2 | -- | -- | 6 | 1.3 | 3 | 12.5 | 9 | 2.0 | -- | -- | 432 | 95.8 | 17 | 70.8 |
| Screenings | 2 | 0.4 | 4 | 15.4 | 3 | 0.7 | 2 | 7.7 | 13 | 2.9 | 2 | 7.7 | 22 | 4.9 | 2 | 7.7 | 410 | 91.1 | 16 | 61.5 |

TABLE 38 FREQUENCY THAT TRADITIONAL AND NONTRADITIONAL DENTAL HYGIENISTS PROVIDE MISCELLANEOUS SERVICES FOR CHILD PATIENTS - 1986

| | Almost all the Time | | | | Most of the Time | | | | Sometimes | | | | Seldom | | | | Never | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Trad. | | N/Trad. | | Trad. | | N/Trad. | | Trad. | | N/Trad. | | Trad. | | N/Trad. | | Trad. | | N/Trad. | |
| | No. | % | No. | % | No. | % | No. | % | No. | % | No. | % | No. | % | No. | % | No. | % | No. | % |
| Sharpen instruments | 340 | 79.4 | 14 | 66.7 | 44 | 10.3 | 1 | 4.8 | 18 | 4.2 | 2 | 9.5 | 8 | 1.9 | -- | -- | 18 | 4.2 | 4 | 19.0 |
| Inspect Ortho. appliances | 142 | 33.0 | 4 | 17.4 | 62 | 14.4 | 2 | 8.7 | 98 | 22.8 | 8 | 34.8 | 33 | 7.7 | 2 | 8.7 | 95 | 22.1 | 7 | 30.4 |
| Inspect Prosth. appliances | 100 | 23.5 | 3 | 13.0 | 45 | 10.6 | 2 | 8.7 | 48 | 11.3 | 3 | 13.0 | 30 | 7.0 | 3 | 13.0 | 203 | 47.7 | 12 | 52.2 |
| Polish amalgam restorations | 19 | 4.4 | -- | -- | 23 | 5.3 | 1 | 4.3 | 73 | 17.0 | 6 | 26.1 | 77 | 17.9 | 5 | 21.7 | 238 | 55.3 | 11 | 47.8 |
| Remove overhangs | 16 | 3.7 | 1 | 4.3 | 29 | 6.8 | 3 | 13.0 | 98 | 22.8 | 6 | 26.1 | 61 | 14.2 | 3 | 13.0 | 225 | 52.4 | 10 | 43.5 |
| Remove sutures | 14 | 3.3 | 2 | 8.7 | 10 | 2.3 | 1 | 4.3 | 80 | 18.7 | 3 | 13.0 | 57 | 13.3 | 1 | 4.3 | 267 | 62.4 | 16 | 69.6 |
| Construct mouth guards-bruxism | 4 | 0.9 | 1 | 4.3 | 4 | 0.9 | -- | -- | 23 | 5.4 | 2 | 8.7 | 18 | 4.2 | 1 | 4.3 | 379 | 88.6 | 19 | 82.6 |
| Construct mouth guards-sports | 4 | 0.9 | -- | -- | 3 | 0.7 | 1 | 4.3 | 21 | 4.9 | 3 | 13.0 | 16 | 3.7 | 3 | 13.0 | 385 | 89.7 | 16 | 69.6 |
| Place temporary restoration | 4 | 0.9 | 1 | 4.3 | 5 | 1.2 | -- | -- | 79 | 18.4 | 4 | 17.4 | 62 | 14.4 | 5 | 21.7 | 280 | 65.1 | 13 | 56.5 |
| Place composite restoration | 2 | 0.5 | 2 | 8.7 | 2 | 0.5 | -- | -- | 8 | 1.9 | -- | -- | 12 | 2.8 | 2 | 8.7 | 406 | 94.4 | 19 | 82.6 |
| Remove Perio. dressings | 2 | 0.5 | -- | -- | 5 | 1.2 | -- | -- | 16 | 3.7 | 2 | 8.7 | 23 | 5.4 | 2 | 8.7 | 383 | 89.3 | 19 | 82.6 |
| Place Perio. dressings | 2 | 0.5 | -- | -- | 3 | 0.7 | -- | -- | 12 | 2.8 | 2 | 8.7 | 21 | 4.9 | 1 | 4.3 | 392 | 91.2 | 20 | 87.0 |
| Place amalgam restorations | 1 | 0.2 | 1 | 4.3 | 4 | 0.9 | -- | -- | 15 | 3.5 | 2 | 8.7 | 10 | 2.3 | 1 | 4.3 | 400 | 93.0 | 19 | 82.6 |
| Remove temporary restorations | 1 | 0.2 | -- | -- | 1 | 0.2 | -- | -- | 36 | 8.4 | 3 | 13.0 | 35 | 8.2 | 5 | 21.7 | 356 | 83.0 | 15 | 65.2 |

TABLE 39 FREQUENCY THAT TRADITIONAL AND NONTRADITIONAL DENTAL HYGIENISTS PROVIDE MISCELLANEOUS SERVICES FOR ADULT PATIENTS - 1986

| | Almost all the Time | | | | Most of the Time | | | | Sometimes | | | | Seldom | | | | Never | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Trad. | | N/Trad. | | Trad. | | N/Trad. | | Trad. | | N/Trad. | | Trad. | | N/Trad. | | Trad. | | N/Trad. | |
| | No. | % | No. | % | No. | % | No. | % | No. | % | No. | % | No. | % | No. | % | No. | % | No. | % |
| Sharpen instruments | 375 | 83.0 | 21 | 80.8 | 44 | 9.7 | 1 | 3.8 | 17 | 3.8 | 3 | 11.5 | 6 | 1.3 | -- | -- | 10 | 2.2 | 1 | 3.8 |
| Inspect Prosth. appliances | 195 | 43.1 | 6 | 23.1 | 94 | 20.8 | 4 | 15.4 | 96 | 21.2 | 8 | 30.8 | 20 | 4.4 | 5 | 19.2 | 47 | 10.4 | 3 | 11.5 |
| Inspect Ortho. appliances | 143 | 31.7 | 4 | 15.4 | 55 | 12.2 | 3 | 11.5 | 89 | 19.7 | 9 | 34.6 | 42 | 9.3 | 2 | 7.7 | 122 | 27.1 | 8 | 30.8 |
| Polish amalgam restorations | 28 | 6.2 | 1 | 3.8 | 29 | 6.4 | 4 | 15.4 | 93 | 20.6 | 7 | 26.9 | 83 | 18.4 | 6 | 23.1 | 219 | 48.5 | 8 | 30.8 |
| Remove overhangs | 21 | 4.6 | 2 | 7.7 | 48 | 10.6 | 5 | 19.2 | 147 | 32.5 | 8 | 30.8 | 82 | 18.1 | 4 | 15.4 | 154 | 34.1 | 7 | 26.9 |
| Remove sutures | 19 | 4.2 | 3 | 11.5 | 21 | 4.7 | 2 | 7.7 | 106 | 23.5 | 6 | 23.1 | 84 | 18.6 | 4 | 15.4 | 221 | 49.0 | 11 | 42.3 |
| Place temporary restorations | 6 | 1.3 | 2 | 7.7 | 10 | 2.2 | -- | -- | 104 | 23.0 | 7 | 26.9 | 86 | 19.0 | 6 | 23.1 | 246 | 54.4 | 11 | 42.3 |
| Place composite restorations | 2 | 0.4 | 2 | 7.7 | 3 | 0.7 | -- | -- | 9 | 2.0 | -- | -- | 14 | 3.1 | 2 | 7.7 | 423 | 93.8 | 22 | 84.6 |
| Remove Perio. dressings | 7 | 1.6 | 2 | 7.7 | 8 | 1.8 | -- | -- | 24 | 5.3 | 4 | 15.4 | 34 | 7.5 | 3 | 11.5 | 378 | 83.8 | 17 | 65.4 |
| Place Perio. dressings | 8 | 1.8 | 2 | 7.7 | 14 | 3.1 | -- | -- | 40 | 8.9 | 5 | 19.2 | 35 | 7.8 | 2 | 7.7 | 354 | 78.5 | 17 | 65.4 |
| Place amalgam restorations | 1 | 0.2 | 2 | 7.7 | 5 | 1.1 | -- | -- | 15 | 3.3 | 1 | 3.8 | 11 | 2.4 | 1 | 3.8 | 419 | 92.9 | 22 | 84.6 |
| Remove temporary restorations | 3 | 0.7 | 1 | 3.8 | 3 | 0.7 | -- | -- | 46 | 10.2 | 4 | 15.4 | 40 | 8.9 | 5 | 19.2 | 358 | 79.6 | 16 | 61.5 |
| Construct mouth guards-sports | 4 | 0.9 | 1 | 3.8 | 2 | 0.4 | -- | -- | 11 | 2.4 | 3 | 11.5 | 15 | 3.3 | 2 | 7.7 | 417 | 92.9 | 20 | 76.9 |
| Construct mouth guards-braxism | 6 | 1.3 | 1 | 3.8 | 6 | 1.3 | 1 | 3.8 | 26 | 5.8 | 3 | 11.5 | 19 | 4.2 | 3 | 11.5 | 395 | 87.4 | 18 | 69.2 |

TABLE 40 FREQUENCY THAT TRADITIONAL AND NONTRADITIONAL DENTAL HYGIENISTS PROVIDE PAIN CONTROL AND PRESCRIPTION PROCEDURES FOR CHILD PATIENTS - 1986

| | Almost all the Time | | | | Most of the Time | | | | Sometimes | | | | Seldom | | | | Never | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Trad. | | N/Trad. | | Trad. | | N/Trad. | | Trad. | | N/Trad. | | Trad. | | N/Trad. | | Trad. | | N/Trad. | |
| | No. | % | No. | % | No. | % | No. | % | No. | % | No. | % | No. | % | No. | % | No. | % | No. | % |
| Topical anesthesia | 32 | 7.5 | 2 | 8.7 | 16 | 3.7 | -- | -- | 106 | 24.7 | 5 | 21.7 | 64 | 14.9 | 9 | 39.1 | 211 | 49.2 | 7 | 30.4 |
| Block injection | 22 | 5.1 | 1 | 4.3 | 8 | 1.9 | -- | -- | 18 | 4.2 | 1 | 4.3 | 16 | 3.7 | 3 | 13.0 | 366 | 85.1 | 18 | 78.3 |
| Infiltration injection | 21 | 4.9 | 1 | 4.3 | 8 | 1.9 | -- | -- | 21 | 4.9 | 2 | 8.7 | 19 | 4.4 | 4 | 17.4 | 361 | 84.0 | 16 | 69.6 |
| Nitrous oxide | 16 | 3.7 | 1 | 4.3 | 12 | 2.8 | 1 | 4.3 | 61 | 14.2 | 2 | 8.7 | 36 | 8.4 | 4 | 17.4 | 304 | 70.9 | 15 | 65.2 |
| Write prescrip. fluorides | 23 | 5.4 | 4 | 18.2 | 20 | 4.7 | 1 | 4.5 | 64 | 14.9 | 1 | 4.5 | 24 | 5.6 | -- | -- | 298 | 69.5 | 16 | 72.7 |
| Provide prescrip. antibiotics | 10 | 2.3 | 1 | 4.3 | 6 | 1.4 | -- | -- | 30 | 7.0 | 2 | 8.7 | 15 | 3.5 | 3 | 13.0 | 366 | 85.7 | 17 | 73.9 |
| Write prescrip. antibiotics | 7 | 1.6 | 1 | 4.3 | 8 | 1.9 | -- | -- | 43 | 10.0 | 2 | 8.7 | 13 | 3.0 | 2 | 8.7 | 358 | 83.4 | 18 | 78.3 |
| Write prescrip. antimicrobials | 5 | 1.2 | 2 | 9.1 | 5 | 1.2 | -- | -- | 22 | 5.1 | 1 | 4.5 | 22 | 5.1 | 2 | 9.1 | 374 | 87.4 | 17 | 77.3 |
| Provide prescrip. pain control med. | 4 | 0.9 | 1 | 4.3 | 3 | 0.7 | -- | -- | 7 | 1.6 | 3 | 13.0 | 13 | 3.0 | 1 | 4.3 | 402 | 93.7 | 18 | 78.3 |
| Provide nonpresc. pain control med. | 1 | 0.2 | 1 | 4.3 | 9 | 2.1 | -- | -- | 26 | 6.1 | 1 | 4.3 | 23 | 5.4 | 3 | 13.0 | 369 | 86.2 | 18 | 78.3 |

TABLE 41 FREQUENCY THAT TRADITIONAL AND NONTRADITIONAL DENTAL HYGIENISTS PROVIDE PAIN CONTROL AND PRESCRIPTION PROCEDURES FOR ADULT PATIENTS - 1986

| | Almost all the Time | | | | Most of the Time | | | | Sometimes | | | | Seldom | | | | Never | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Trad. | | N/Trad. | | Trad. | | N/Trad. | | Trad. | | N/Trad. | | Trad. | | N/Trad. | | Trad. | | N/Trad. | |
| | No. | % | No. | % | No. | % | No. | % | No. | % | No. | % | No. | % | No. | % | No. | % | No. | % |
| Topical anesthesia | 58 | 12.8 | 6 | 23.1 | 38 | 8.4 | 1 | 3.8 | 214 | 47.2 | 8 | 30.8 | 58 | 12.8 | 6 | 23.1 | 85 | 18.8 | 5 | 19.2 |
| Infiltration injection | 34 | 7.5 | 1 | 3.8 | 18 | 4.0 | 2 | 7.7 | 63 | 13.9 | 3 | 11.5 | 18 | 4.0 | 3 | 11.5 | 320 | 70.6 | 17 | 65.4 |
| Block injection | 33 | 7.3 | 1 | 3.8 | 13 | 2.9 | -- | -- | 57 | 12.6 | 3 | 11.5 | 16 | 3.5 | 1 | 3.8 | 334 | 73.7 | 21 | 80.7 |
| Nitrous oxide | 28 | 6.2 | 2 | 7.7 | 17 | 3.8 | 1 | 3.8 | 131 | 29.0 | 2 | 7.7 | 62 | 13.7 | 4 | 15.4 | 214 | 47.3 | 17 | 65.4 |
| Write prescrip. fluorides | 22 | 4.9 | 3 | 12.0 | 19 | 4.2 | 1 | 4.0 | 65 | 14.5 | 3 | 12.0 | 21 | 4.7 | -- | -- | 321 | 71.7 | 18 | 72.0 |
| Provide prescrip. antibiotics | 11 | 2.4 | 2 | 7.7 | 7 | 1.6 | -- | -- | 49 | 10.9 | 5 | 19.2 | 27 | 6.0 | 3 | 11.5 | 356 | 79.1 | 16 | 61.5 |
| Write prescrip. antibiotics | 10 | 2.2 | 2 | 7.7 | 9 | 2.0 | -- | -- | 58 | 12.9 | 4 | 15.4 | 19 | 4.2 | 1 | 3.8 | 355 | 78.7 | 19 | 73.1 |
| Write prescrip. antimicrobials | 12 | 2.7 | 3 | 12.0 | 7 | 1.6 | -- | -- | 33 | 7.3 | 3 | 12.0 | 20 | 4.4 | 1 | 4.0 | 378 | 84.0 | 18 | 72.0 |
| Write prescrip. pain control med. | 5 | 1.1 | 2 | 8.0 | 3 | 0.7 | -- | -- | 18 | 4.0 | 4 | 16.0 | 21 | 4.7 | -- | -- | 404 | 89.6 | 19 | 76.0 |
| Provide nonpresc. pain control med. | 5 | 1.1 | 2 | 8.0 | 11 | 2.4 | -- | -- | 59 | 13.1 | 3 | 12.0 | 36 | 8.0 | 3 | 12.0 | 340 | 75.4 | 17 | 68.0 |

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TABLE 42 FREQUENCY THAT TRADITIONAL AND NONTRADITIONAL DENTAL HYGIENISTS PERFORM MANAGEMENT ACTIVITIES FOR CHILD PATIENTS - 1986

| | Almost all the Time | | | | Most of the Time | | | | Sometimes | | | | Seldom | | | | Never | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Trad. | | N/Trad. | | Trad. | | N/Trad. | | Trad. | | N/Trad. | | Trad. | | N/Trad. | | Trad. | | N/Trad. | |
| | No. | % | No. | % | No. | % | No. | % | No. | % | No. | % | No. | % | No. | % | No. | % | No. | % |
| Supervise recall system | 190 | 44.3 | 12 | 52.5 | 54 | 12.6 | 1 | 4.3 | 50 | 11.7 | 2 | 8.7 | 35 | 8.2 | 3 | 13.0 | 100 | 23.3 | 5 | 21.7 |
| Daily operation recall system | 142 | 33.2 | 11 | 47.8 | 47 | 11.0 | -- | -- | 57 | 13.3 | 2 | 8.7 | 56 | 13.1 | 5 | 21.7 | 126 | 29.4 | 5 | 21.7 |
| Order own supplies | 153 | 35.7 | 9 | 40.9 | 53 | 12.4 | 4 | 18.2 | 68 | 15.9 | 1 | 4.5 | 43 | 10.0 | 3 | 13.6 | 111 | 25.9 | 5 | 22.7 |
| Design recall system | 150 | 35.4 | 9 | 39.1 | 39 | 9.2 | 2 | 8.7 | 36 | 8.5 | -- | -- | 37 | 8.7 | 4 | 17.4 | 162 | 38.2 | 8 | 34.8 |
| Schedule own patients | 66 | 15.3 | 7 | 30.4 | 27 | 6.3 | -- | -- | 158 | 36.7 | 5 | 21.7 | 76 | 17.7 | 7 | 30.4 | 103 | 24.0 | 4 | 17.4 |
| Train personnel | 22 | 5.2 | 3 | 13.0 | 13 | 3.1 | 1 | 4.3 | 80 | 18.9 | 1 | 4.3 | 45 | 10.6 | 3 | 13.0 | 264 | 62.3 | 15 | 65.2 |
| Evaluate personnel | 15 | 3.5 | 3 | 13.0 | 8 | 1.9 | 1 | 4.3 | 51 | 11.9 | -- | -- | 40 | 9.4 | 4 | 17.4 | 313 | 73.3 | 15 | 65.2 |
| Bill for services | 45 | 10.5 | -- | -- | 6 | 1.4 | -- | -- | 24 | 5.6 | -- | -- | 25 | 5.8 | 3 | 14.3 | 328 | 76.6 | 18 | 85.7 |
| Collect fee for services | 14 | 3.3 | -- | -- | 5 | 1.2 | -- | -- | 56 | 13.1 | -- | -- | 65 | 15.2 | 3 | 13.6 | 288 | 67.3 | 19 | 86.4 |
| Conduct staff meetings | 13 | 3.1 | -- | -- | 9 | 2.1 | 1 | 4.3 | 45 | 10.6 | 2 | 8.7 | 36 | 8.5 | 3 | 13.0 | 321 | 75.7 | 17 | 73.9 |
| Submit insurance forms | 22 | 5.1 | -- | -- | 5 | 1.2 | -- | -- | 37 | 8.6 | 2 | 8.7 | 39 | 9.1 | 3 | 13.0 | 325 | 75.9 | 18 | 78.3 |
| Market dental practice/Tx | 27 | 6.4 | 1 | 4.5 | 22 | 5.2 | -- | -- | 45 | 10.7 | 1 | 4.5 | 31 | 7.4 | 1 | 4.5 | 296 | 70.3 | 19 | 86.4 |
| Interview/hire personnel | 11 | 2.6 | 1 | 4.5 | 6 | 1.4 | 1 | 4.5 | 26 | 6.1 | -- | -- | 24 | 5.6 | -- | -- | 360 | 84.3 | 20 | 90.9 |

TABLE 43 FREQUENCY THAT TRADITIONAL AND NONTRADITIONAL DENTAL HYGIENISTS PERFORM MANAGEMENT ACITIVIES FOR ADULT PATIENTS - 1986

| | Almost all the Time | | | | Most of the Time | | | | Sometimes | | | | Seldom | | | | Never | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Trad. | | N/Trad. | | Trad. | | N/Trad. | | Trad. | | N/Trad. | | Trad. | | N/Trad. | | Trad. | | N/Trad. | |
| | No. | % | No. | % | No. | % | No. | % | No. | % | No. | % | No. | % | No. | % | No. | % | No. | % |
| Supervise recall system | 196 | 43.5 | 15 | 57.7 | 58 | 12.9 | 1 | 3.8 | 54 | 12.0 | 2 | 7.7 | 39 | 8.6 | 4 | 15.4 | 104 | 23.1 | 4 | 15.4 |
| Daily operation recall system | 145 | 32.2 | 14 | 53.8 | 51 | 11.3 | -- | -- | 62 | 13.8 | 2 | 7.7 | 59 | 13.1 | 6 | 23.1 | 133 | 29.6 | 4 | 15.4 |
| Order own supplies | 162 | 35.9 | 13 | 50.0 | 57 | 12.6 | 4 | 15.4 | 69 | 15.3 | 2 | 7.7 | 47 | 10.4 | 4 | 15.4 | 116 | 25.7 | 3 | 11.5 |
| Design recall system | 154 | 34.5 | 12 | 46.2 | 42 | 9.4 | 2 | 7.7 | 39 | 8.7 | -- | -- | 40 | 9.0 | 5 | 19.2 | 171 | 38.3 | 7 | 26.9 |
| Schedule own patients | 67 | 14.8 | 11 | 42.3 | 31 | 6.9 | 1 | 3.8 | 168 | 37.2 | 5 | 19.2 | 83 | 18.4 | 7 | 26.9 | 103 | 22.8 | 2 | 7.7 |
| Train personnel | 22 | 4.9 | 4 | 15.4 | 12 | 2.7 | 2 | 7.7 | 94 | 21.0 | 2 | 7.7 | 49 | 10.9 | 4 | 15.4 | 271 | 60.5 | 14 | 53.8 |
| Evaluate personnel | 16 | 3.6 | 4 | 15.4 | 9 | 2.0 | 1 | 3.8 | 54 | 12.0 | -- | -- | 43 | 9.6 | 5 | 19.2 | 328 | 72.9 | 16 | 61.5 |
| Bill for services | 46 | 10.2 | 1 | 4.2 | 7 | 1.6 | -- | -- | 24 | 5.3 | -- | -- | 28 | 6.2 | 3 | 12.5 | 346 | 76.7 | 20 | 83.3 |
| Collect fee for services | 14 | 3.1 | -- | -- | 6 | 1.3 | -- | -- | 56 | 12.4 | -- | -- | 72 | 16.0 | 3 | 12.0 | 303 | 67.2 | 22 | 88.0 |
| Conduct staff meetings | 13 | 2.9 | 1 | 3.8 | 9 | 2.0 | 2 | 7.7 | 53 | 11.9 | 2 | 7.7 | 38 | 8.5 | 3 | 11.5 | 334 | 74.7 | 18 | 69.2 |
| Submit insurance forms | 22 | 4.9 | -- | -- | 4 | 0.9 | -- | -- | 39 | 8.7 | 2 | 7.7 | 39 | 8.7 | 3 | 11.5 | 346 | 76.9 | 21 | 80.8 |
| Market dental practice/Tx | 30 | 6.7 | 1 | 4.0 | 24 | 5.4 | -- | -- | 48 | 10.8 | 1 | 4.0 | 34 | 7.6 | 2 | 2.7 | 310 | 69.5 | 21 | 84.0 |
| Interview/hire personnel | 12 | 2.7 | 2 | 8.0 | 7 | 1.6 | 1 | 4.0 | 28 | 6.2 | -- | -- | 26 | 5.8 | -- | -- | 377 | 83.8 | 22 | 88.0 |

TABLE 44 STATISTICALLY SIGNIFICANT DIFFERENCES IN FREQUENCY THAT SERVICES WERE PERFORMED BY TRADITIONAL AND NONTRADITIONAL DENTAL HYGIENISTS - 1986

Child Frequency

| Service | p Value | Group Does Most Frequently |
|---|---|---|
| Head and neck palpitation - Recall | .0452 | Nontraditional |
| Probe preselected teeth - Initial | .0408 | Nontraditional |
| Chart probe depths - Recall | .0017 | Nontraditional |
| Expose bitewings x-rays | .0551 | Traditional |
| Process film | .0097 | Traditional |
| Scale supragingivally | .0036 | Traditional |
| Rubber cup polish | .0000 | Traditional |
| Toothbrush instruction | .0279 | Traditional |
| Screenings - Groups | .0000 | Nontraditional |
| Plan programs - Groups | .0000 | Nontraditional |
| Provide programs - Groups | .0000 | Nontraditional |
| Evaluate programs - Groups | .0000 | Nontraditional |
| Written reports - Groups | .0000 | Nontraditional |
| Provide prescription pain control med. | .0005 | Nontraditional |
| Evaluate personnel | .0156 | Nontraditional |
| Place composite restorations | .0044 | Nontraditional |

Adult Frequency

| Service | p Value | Group Does Most Frequently |
|---|---|---|
| Chart probe depths - Recall | .0046 | Traditional |
| Chart occlusal findings - Recall | .0471 | Traditional |
| Expose bitewing x-rays | .0032 | Traditional |
| Tooth vitality tests | .0201 | Nontraditional |
| Bacterial evaluations | .0259 | Nontraditional |
| Recommend fluoride supplements | .0020 | Traditional |
| Construct mouth guards-sports | .0159 | Nontraditional |
| Toothbrush instruction | .0070 | Nontraditional |
| Plan programs - Groups | .0000 | Nontraditional |
| Provide programs - Groups | .0000 | Nontraditional |
| Evaluate programs - Groups | .0000 | Nontraditional |
| Written reports - Groups | .0000 | Nontraditional |
| Provide prescription pain control med. | .0018 | Nontraditional |
| Schedule own patients | .0120 | Nontraditional |
| Train personnel | .0103 | Nontraditional |
| Evaluate personnel | .0055 | Nontraditional |
| Place amalgam restorations | .0480 | Nontraditional |
| Place composite restorations | .0199 | Nontraditional |
| Inspect prosthetic appliances | .0228 | Traditional |
| Place periodontal dressings | .0066 | Nontraditional |

TABLE 45 METHOD OF CHARGING FOR SCALING AND PERIODONTAL SERIVCES
BY TRADITIONAL AND NONTRADITIONAL DENTAL HYGIENISTS WHO PERFORM EACH SERVICE - 1986

NONTRADITIONAL DENTAL HYGIENISTS

| Service | Prophylaxis Cluster | | | | Scaling, Root Planing, and Periodontal Cluster | | | | Separate Charge | | | | No Charge | | | | Other | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Child | | Adult | | Child | | Adult | | Child | | Adult | | Child | | Adult | | Child | | Adult | |
| | No. | % | No. | % | No. | % | No. | % | No. | % | No. | % | No. | % | No. | % | No. | % | No. | % |
| Hand scale-supra. | 13 | 92.9 | 13 | 86.7 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 2 | 13.3 | 1 | 7.1 | -- | -- |
| Hand scale-sub. | 12 | 92.3 | 13 | 86.7 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 2 | 13.3 | 1 | 7.1 | -- | -- |
| Ultrasonic scale-supra. | 6 | 100.0 | 9 | 75.0 | -- | -- | -- | -- | -- | -- | 1 | 8.3 | -- | -- | 2 | 16.7 | -- | -- | -- | -- |
| Ultrasonic Scale-sub. | 5 | 100.0 | 9 | 81.8 | -- | -- | -- | -- | -- | -- | 1 | 9.1 | -- | -- | 1 | 9.1 | -- | -- | -- | -- |
| Root plane | 3 | 60.0 | 8 | 53.3 | 2 | 40.0 | 3 | 20.0 | -- | -- | 2 | 13.3 | -- | -- | 2 | 13.3 | -- | -- | -- | -- |
| Curettage | 2 | 50.0 | 6 | 50.0 | 2 | 50.0 | 3 | 25.0 | -- | -- | 1 | 8.3 | -- | -- | 2 | 16.7 | -- | -- | -- | -- |
| Gingivectomy | 1 | 50.0 | 2 | 66.7 | -- | -- | -- | -- | 1 | 50.0 | 1 | 33.3 | -- | -- | -- | -- | -- | -- | -- | -- |

TRADITIONAL DENTAL HYGIENISTS

| | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Hand scale-supra. | 395 | 99.5 | 417 | 99.3 | -- | -- | 1 | 0.2 | -- | -- | 2 | 0.2 | 1 | 0.3 | 1 | 0.2 | 1 | 0.3 | -- | -- |
| Hand scale-sub. | 361 | 98.1 | 401 | 95.5 | 5 | 1.4 | 18 | 4.3 | -- | -- | -- | -- | 1 | 0.3 | 1 | 0.2 | 1 | 0.3 | -- | -- |
| Ultrasonic scale-supra. | 168 | 93.9 | 365 | 92.6 | 3 | 1.7 | 1 | 2.8 | 4 | 2.2 | 12 | 3.0 | 2 | 1.1 | 2 | 0.5 | 2 | 1.1 | 7 | 2.7 |
| Ultrasonic scale-sub. | 123 | 91.1 | 343 | 89.6 | 3 | 2.2 | 19 | 5.0 | 6 | 4.4 | 18 | 4.7 | 1 | 0.7 | 1 | 0.2 | 2 | 1.4 | 2 | 0.5 |
| Root plane | 100 | 71.4 | 238 | 58.6 | 33 | 23.6 | 131 | 32.3 | 6 | 4.3 | 36 | 8.9 | -- | -- | 1 | 0.2 | 1 | 0.7 | -- | -- |
| Curettage | 47 | 59.5 | 151 | 49.7 | 24 | 30.4 | 120 | 39.5 | 7 | 8.9 | 32 | 10.5 | -- | -- | 1 | 0.3 | 1 | 1.3 | -- | -- |
| Gingivectomy | 6 | 50.0 | 20 | 55.6 | 3 | 25.0 | 11 | 30.6 | 2 | 16.7 | 4 | 11.1 | -- | -- | 1 | 2.8 | 1 | 8.3 | -- | -- |

TABLE 46 SERVICES FOR ADULT PATIENTS BY PERCENT OF TRADITIONAL* AND NONTRADITIONAL HYGIENISTS WHO CHARGED A SEPARATE FEE - 1986

| Traditional Hygienists | | Nontraditional Hygienists | |
|---|---|---|---|
| Service | Percent | Service | Percent |
| Sealants | 97 | Full mouth x-rays | 82 |
| Full mouth x-rays | 96 | Impressions-study models | 80 |
| Panoramic x-rays | 95 | Bitewing x-rays | 79 |
| Bitewing x-rays | 94 | Periapical x-rays | 77 |
| Periapical x-rays | 94 | Sealants | 75 |
| Topical fluoride | 73 | Mouth guards - sports | 67 |
| Mouth guards - bruxism | 73 | Panoramic x-rays | 63 |
| Mouth guards - sports | 58 | Nitrous oxide | 60 |
| Composite restorations - place | 56 | Topical fluoride | 54 |
| Impressions - study models | 55 | Mouth guards - bruxism | 50 |
| Emergency examinations | 53 | Tooth vitality tests | 40 |
| Amalgam restorations - place | 50 | Amalgam restorations - place | 33 |
| Bacterial Evaluation | 29 | Gingivectomies | 33 |
| Nitrous oxide | 26 | Emergency examinations | 30 |
| Temporary restorations | 19 | Block injections | 20 |
| Tooth vitality test | 13 | Infiltration injections | 17 |
| Curettage | 11 | Formal plaque control programs | 17 |
| | | Temporary restorations - place | 12 |
| | | Amalgam restorations - polish | 10 |

*Ten or more traditional hygienists

TABLE 47 FEE INFORMATION FOR 16 CHILD AND 19 ADULT SERVICES OR CHARGE CLUSTERS FOR TRADITIONAL DENTAL HYGIENISTS - 1986

| Service or Cluster | Child Fees in Dollars | | | | | Adult Fees in Dollar | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | No.* | Range | Median | Mean | Std. Dev. | No. | Range | Median | Mean | Std. Dev. |
| Recall examination | 143 | $5-$65 | $10.00 | $12.85 | $8.51 | 150 | $5-$94 | $12.00 | $15.15 | $12.58 |
| Emergency examination | 96 | 5-50 | 15.00 | 15.78 | 7.39 | 102 | 5-50 | 15.00 | 16.34 | 7.70 |
| Prophylaxis | 382 | 6-65 | 21.00 | 23.52 | 9.18 | 406 | 14-85 | 30.00 | 31.23 | 10.60 |
| Full mouth x-rays | 181 | 9-70 | 35.00 | 36.81 | 9.70 | 288 | 15-99# | 39.00 | 40.06 | 11.05 |
| Bitewing x-rays (2) | 341 | 4-36 | 12.00 | 12.57 | 5.20 | 357 | 4-36 | 12.00 | 13.37 | 5.59 |
| Periapical x-ray (1) | 322 | 2-30 | 6.00 | 6.42 | 3.19 | 346 | 1-30 | 6.00 | 6.49 | 3.16 |
| Panorex x-ray | 170 | 15-60 | 30.00 | 32.01 | 7.16 | 178 | 15-60 | 30.00 | 32.09 | 7.29 |
| Impressions - study models | 62 | 10-75 | 24.00 | 23.73 | 12.16 | 90 | 10-99# | 25.00 | 25.73 | 15.31 |
| Sealant (1) | 234 | 4-58 | 12.00 | 13.99 | 6.42 | 129 | 4-58 | 12.00 | 14.04 | 7.28 |
| Fluoride application | 266 | 2-25 | 10.00 | 11.03 | 4.48 | 240 | 1-25 | 10.00 | 10.72 | 4.38 |
| Mouth guard - sport | 16 | 25-99# | 67.50 | 68.50 | 26.80 | Not Included | | | | |
| Mouth guard - bruxism | 17 | 25-99# | 99.00 | 78.00 | 29.69 | 25 | 16-99# | 95.00 | 75.36 | 30.95 |
| Root plane - one quad. | 38 | 8-83 | 55.00 | 50.50 | 21.77 | 167 | 10-99# | 50.00 | 49.57 | 23.44 |
| Curettage - one quad. | Not Included | | | | | 150 | 10-99# | 50.00 | 50.32 | 23.36 |
| Gingivectomy - one quad. | Not Included | | | | | 15 | 15-99# | 50.00 | 54.60 | 25.18 |
| Nutritional counseling | 6 | 5-95 | 27.50 | 35.83 | 32.00 | 9 | 10-95 | 30.00 | 35.56 | 26.15 |
| Plaque control | 10 | 10-95 | 27.50 | 33.50 | 25.06 | 18 | 10-95 | 22.50 | 28.94 | 24.24 |
| Remove overhang | Not Included | | | | | 11 | 5-30 | 10.00 | 14.09 | 9.44 |
| Ultrasonic scaling sub. | Not Included | | | | | 23 | 3-99# | 39.00 | 37.44 | 24.88 |

No.* is number who responded that there was a fee

99# is any amount $99 and over

TABLE 48 FEE INFORMATION FOR 16 CHILD AND 19 ADULT SERVICES AND CHARGE CLUSTERS FOR NONTRADITIONAL DENTAL HYGIENISTS

| Service or Cluster | Child Fees in Dollars | | | | | Adult Fees in Dollar | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | No.* | Range | Median | Mean | Std. Dev. | No. | Range | Median | Mean | Std. Dev. |
| Recall examination | 2 | $10-$20 | $15.00 | $15.00 | $7.07 | 2 | $10-$20 | $15.00 | $15.00 | $7.07 |
| Emergency Examination | 3 | 10-25 | 17.00 | 17.33 | 7.51 | 3 | 17-25 | 19.00 | 20.33 | 4.16 |
| Prophylaxis | 13 | 12-75 | 20.00 | 23.38 | 16.12 | 13 | 20-75 | 25.00 | 32.61 | 14.48 |
| Full mouth x-rays | 6 | 20-50 | 35.00 | 35.00 | 10.00 | 8 | 30-50 | 35.00 | 35.62 | 6.78 |
| Bitewing x-ray (2) | 10 | 5-25 | 11.00 | 12.40 | 6.08 | 10 | 5-25 | 13.00 | 13.80 | 6.48 |
| Periapical x-ray (1) | 9 | 4-8 | 5.00 | 5.56 | 1.24 | 9 | 4-8 | 5.00 | 5.56 | 1.24 |
| Panorex x-ray | 4 | 24-35 | 32.50 | 31.00 | 5.23 | 4 | 24-35 | 32.50 | 31.00 | 5.23 |
| Impressions - study models | 2 | 15-20 | 17.50 | 17.50 | 3.54 | 4 | 15-20 | 20.00 | 18.75 | 2.50 |
| Sealant (1) | 7 | 7-20 | 10.00 | 11.00 | 4.28 | 5 | 7-20 | 10.00 | 11.80 | 4.92 |
| Fluoride Application | 6 | 10-20 | 16.00 | 15.00 | 4.20 | 6 | 10-18 | 12.50 | 13.33 | 3.78 |
| Mouth guard - sport | 1 | 99# | 99# | 99# | -- | Not Included | | | | |
| Mouth guard - bruxism | 2 | 35-99# | 67.00 | 67.00 | 45.26 | 2 | 35-99# | 67.00 | 67.00 | 45.26 |
| Root Plane - one quad. | 1 | 32 | 32.00 | 32.00 | -- | 4 | 15-99# | 53.50 | 55.25 | 38.58 |
| Curettage - one quad. | Not Included | | | | | 3 | 32-75 | 50.00 | 52.33 | 21.60 |
| Gingivectomy - one quad. | Not Included | | | | | 1 | 75 | 75.00 | 75.00 | -- |
| Nutritional counseling | 0 | -- | -- | -- | -- | 1 | 9.00 | 9.00 | 9.00 | -- |
| Plaque control | 2 | 20-99# | 59.50 | 59.50 | 39.50 | 2 | 20-99# | 59.50 | 59.50 | 39.50 |
| Remove overhang | Not Included | | | | | 0 | -- | -- | -- | -- |
| Ultrasonic scaling-sub. | Not Included | | | | | 0 | -- | -- | -- | -- |

No.* is number who responded that a fee was charged and included the dollar amount

99# is any amount $99 and over

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Table 49 Remuneration Data for Traditional and Nontraditional Dental Hygienists - 1986

| | | Traditional | | Nontraditional | |
|---|---|---|---|---|---|
| | | No. | % | No. | % |
| Pay increase in past 6 months | | | | | |
| | Yes | 300 | 51.4 | 21 | 63.6 |
| | No | 284 | 48.6 | 12 | 36.4 |
| | Total | 584 | 100.0 | 33 | 100.0 |
| Receive fringe benefits | | | | | |
| | Yes | 241 | 54.4 | 22 | 81.5 |
| | No | 202 | 45.6 | 5 | 18.5 |
| | Total | 443 | 100.0 | 27 | 100.0 |

| | Range | Mean | Std. Dev. | Median | Range | Mean | Std. Dev. | Median |
|---|---|---|---|---|---|---|---|---|
| Wages last day | $27-$376 | $106.27 | $37.78 | $100.00 | $55-$140 | $85.12 | $24.17 | $75.00 |
| Wages per hour | $6.30-$47.00 | $14.16 | $4.70 | $12.63 | $7.25-$17.50 | $10.47 | $2.78 | $9.38 |

Table 50 Method of Payment for Traditional and Nontraditional Dental Hygienists' Work - 1985

| | Traditional Clinical Hygienists | | Nontraditional Clinical Hygienist | |
|---|---|---|---|---|
| | No. | % | No. | % |
| Salary | 531 | 79.5 | 33 | 100.0 |
| Commission | 65 | 9.7 | -- | -- |
| Salary plus Commission | 63 | 9.4 | -- | -- |
| Other | 9 | 1.3 | -- | -- |
| TOTAL | 668 | 99.9 | 33 | 100.0 |

Table 51 Total Yearly Income of Traditional and Nontraditional Dental Hygienists - 1985

| | Traditional Clinical Hygienists | | Nontraditional Clinical Hygienist | |
|---|---|---|---|---|
| | No. | % | No. | % |
| 0 - $ 5,000 | 11 | 1.7 | -- | -- |
| $ 5,000 - $ 7,499 | 11 | 1.7 | 2 | 6.1 |
| $ 7,500 - $ 9,999 | 26 | 3.9 | 1 | 3.0 |
| $10,000 - $12,499 | 45 | 6.8 | -- | -- |
| $12,500 - $15,999 | 77 | 11.6 | 7 | 21.2 |
| $15,000 - $19,999 | 191 | 28.7 | 15 | 45.5 |
| $20,000 - $24,999 | 190 | 28.6 | 7 | 21.2 |
| $25,000 - $29,999 | 74 | 11.1 | -- | -- |
| $30,000 or more | 40 | 6.0 | 1 | 3.0 |
| TOTAL | 665 | 100.1 | 33 | 100.0 |

Table 52 Money Generated and Wages Earned by Hours Worked for All Clinical Dental Hygienists - 1986

| Hours Worked | N | Money Generated in Dollars | | | | Wages Earned in Dollars | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | Range | Mean | Std. Dev. | Median | Range | Mean | Std. Dev. | Median |
| 3 | 3 | $140-229 | $180 | $45 | $170 | $48-95 | $75 | $24 | $83 |
| 3 1/2 | 5 | 120-300 | 190 | 69 | 180 | 27-55 | 46 | 10 | 48 |
| 4 | 18 | 87-270 | 146 | 60 | 140 | 35-92 | 54 | 16 | 50 |
| 4 1/2 | 5 | 151-250 | 184 | 40 | 177 | 42-77 | 61 | 14 | 65 |
| 5 | 18 | 120-580 | 244 | 118 | 225 | 50-150 | 79 | 29 | 72 |
| 6 | 20 | 92-570 | 271 | 113 | 252 | 54-160 | 97 | 31 | 96 |
| 6 1/2 | 6 | 260-999* | 449 | 279 | 330 | 75-187 | 124 | 36 | 124 |
| 7 | 25 | 158-515 | 313 | 117 | 322 | 75-175 | 110 | 33 | 93 |
| 7 1/2 | 18 | 178-580 | 281 | 143 | 264 | 55-175 | 107 | 36 | 95 |
| 8 | 199 | 50-900 | 340 | 164 | 350 | 58-376 | 109 | 36 | 100 |
| 8 1/2 | 28 | 73-999* | 417 | 192 | 387 | 65-263 | 114 | 38 | 109 |
| 9 | 31 | 220-975 | 392 | 201 | 382 | 70-204 | 116 | 29 | 108 |
| 9 1/2 | 7 | 219-999* | 509 | 266 | 470 | 80-175 | 116 | 33 | 105 |
| 10 | 17 | 219-618 | 385 | 150 | 400 | 63-296 | 124 | 48 | 118 |
| 11 | 1 | 999* | 999* | -- | 999* | 135 | 135 | -- | 135 |

*Largest number coded was $999.

Table 53 Frequency Distributions for Payrate for Traditional and Nontraditional Dental Hygienists - 1986

| Payrate Percent | Traditional N | Traditional % | Nontraditional N | Nontraditional % |
|---|---|---|---|---|
| 0 - 9 | 1 | 0.2 | -- | -- |
| 10 - 19* | 40* | 10.4* | 2 | 20.0 |
| 20 - 29 | 135 | 35.1 | 5 | 50.0 |
| 30 - 39 | 117 | 30.4 | 1 | 10.0 |
| 40 - 49 | 50 | 13.0 | 1 | 10.0 |
| 50 - 59 | 30 | 7.8 | -- | |
| 60 - 69 | 6 | 1.6 | -- | |
| 70 - 79 | 4 | 1.0 | -- | |
| 80 - 89 | -- | -- | -- | |
| 90 - 99 | -- | -- | -- | |
| 100 or more | 2 | 0.5 | 1 | 10.0 |
| TOTAL | 385 | 100.0 | 10 | 100.0 |

| | Payrate-Traditional | Payrate - Nontraditional |
|---|---|---|
| Range | 7.5% - 163.0% | 16.54% - 19.44% |
| Mean | 33.2% | 36.4% |
| Std. Dev. | 13.9% | 37.1% |
| Mode | 30.9% | 23.1% |

*For example, 40 traditional hygienists or 10.4% of all traditional hygienists were paid 10% to 19% of the money they generated from services they provided that day.

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